5-1984

A Cooperative Care Facility for the New England Eye Center

Fletcher Henri Macneill
Clemson University

A COOPERATIVE CARE FACILITY FOR THE NEW ENGLAND EYE CENTER

A COMPLEX FOR TREATMENT AND SURGERY OF EYE DISORDERS IN WHICH CLIENTS AND SUPPORT COMPANIONS ARE ACTIVE PARTICIPANTS IN THE HEALTH CARE PROCESS

A joint venture with Lawrence Memorial Hospital, Medford, Massachusetts

FLETCHER HENRI MACNEILL
Spring, 1984

An architectural design project submitted to the faculty of the College of Architecture, Clemson University, Clemson, South Carolina, in partial fulfillment of requirements for the degree

MASTER OF ARCHITECTURE

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Major Advisor

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Dean, College of Architecture

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ABSTRACT

The economic climate that has brought about an extensive effort to re-structure the financing of American health care has also signaled the opportunity to introduce alternative approaches to providing care. The concept of Cooperative Patient Care is one innovation which can mitigate the severe problem of financing health care costs while also producing benefits for the users, in their recovery from illness or surgery, which are not available in the typical acute care setting.

Cooperative Patient Care distinguishes itself from conventional acute medical care by the fact that the client becomes an active participant in his treatment program, along with a companion who shares tasks and responsibilities typically assumed by the professional staff. Together the client and his companion (most often a spouse) work cooperatively with a multi-disciplinary team to chart his course to wellness.

A COOPERATIVE CARE FACILITY FOR THE NEW ENGLAND EYE CENTER is an architectural proposal which investigates the physical setting that is needed to facilitate the objectives of this unique approach to client care. While the advantages of Cooperative Care can be enumerated with regard to economics and medicine, there is a need for an investigation into the architectural parameters so that supportive regulations and funding patterns can be formulated. Because procedures for licensing and accrediting Cooperative Care facilities have not, at present, been formulated this design solution attempts to anticipate the parameters of such developments.

A COOPERATIVE CARE FACILITY FOR THE NEW ENGLAND EYE CENTER

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INTRODUCTION

In ages past people with serious illnesses had to travel great distances, to large cities, to find any hope for a cure. Because the sojourn was long and arduous, and the prospect for recovery was minimal, the infirmed traveler was sure to have with him a companion who could lend support and provide much needed comfort. There were few options between the extremes of making a pilgrimage to receive treatment from trained and educated physicians and employing the tennuous survival skills passed down from one generation to the next within the home. Modern medicine has produced a vast range of possibilities for overcoming illnesses which, in the past, meant certain death. With the advent of micro-technology many of the most sophisticated treatment modes are available to the masses. Recent developments in Home Health Services have made it possible, with the benefit of advances in technology, for people to receive health care treatments which previously required admission into a hospital.

Medical technology continues to improve at such an accelerated rate that there is a tendency to view the powers of science as a panacea. The intricacies of modern medicine are so far beyond the comprehension of most people that we

have come to perceive our role as recipients of medical care as one of unequivocal passivity. However, there is the danger that this false sense of security may bring about a loss of one's will to survive. In his book, Anatomy of an Illness as Perceived by a Patient, Norman Cousins wrote:

> The trend in modern medicine is to move away from the notion that it is always mandatory to hospitalize seriously ill patients. The great technological advances in electronic equipment typified by the hospital intensive care unit are not without their built-in penalties. A patient in an intensive care unit is provided with everything diagnostically necessary in an emergency--everything, that is, except the sense of security and ease that the body needs even more than pinpointed and clicking surveillance. It creates the tendency to panic, itself one of the most dangerous multipliers of disease.[1]

The full benefits of medical technology can best be realized if the recipients take on an active partnership with those who are providing the care. However this can only be achieved through increased awareness on the part of the client. Eli Ginzberg, of Columbia University, points out:

> No improvement in the health care system will be efficacious unless the citizen assumes responsibility for his own well-being. There are substantial gains to be made by linking the individual citizen to the health system through more sophisticated education.[2]

The above statements could not be more timely, now when much of what used to require the most sophisticated equipment, personnel and facilities that a hospital could amass can be accomplished by a few professionals with portable equipment in the clients' home. All of this, technology etc. notwithstanding, is predicated upon the client's willingness and the family's capacity to make the adjustments that this approach to health care prescribes.

In the case of highly specialized medical treatment people must still travel great distances for the care without which they would be hopeless for a cure. By engaging the client and his or her companion in the regimen of care, cooperative care borrows the security of a hospital setting along with the supportive qualities of the home and family. It is an intermediary between the two extremities of the modern health care delivery system.

DESIGN PROPOSAL

A COOPERATIVE CARE FACILITY FOR THE NEW ENGLAND EYE CENTER

AN ARCHITECTURAL DESIGN PROJECT SUBMITTED TO THE FACULTY OF THE COLLEGE OF ARCHITECTURE , CLEMSON UNIVERSITY , IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE "MASTER OF ARCHITECTURE" .

FLETCHER H. MACNEILL
HEALTH CARE FACILITY STUDIO
SPRING 1984

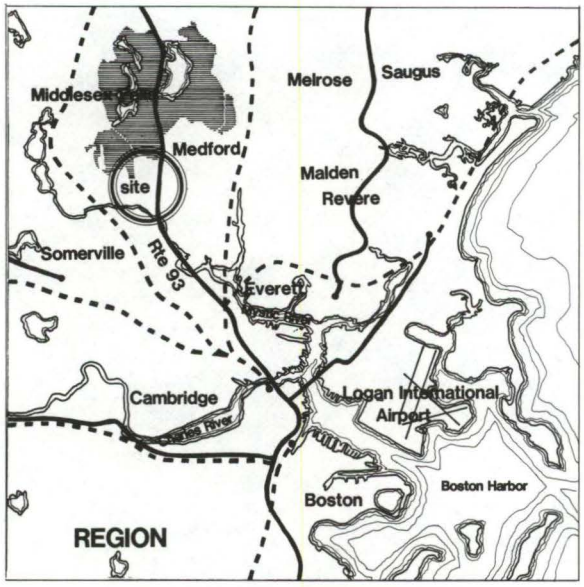
PURPOSE OF PROPOSED FACILITY

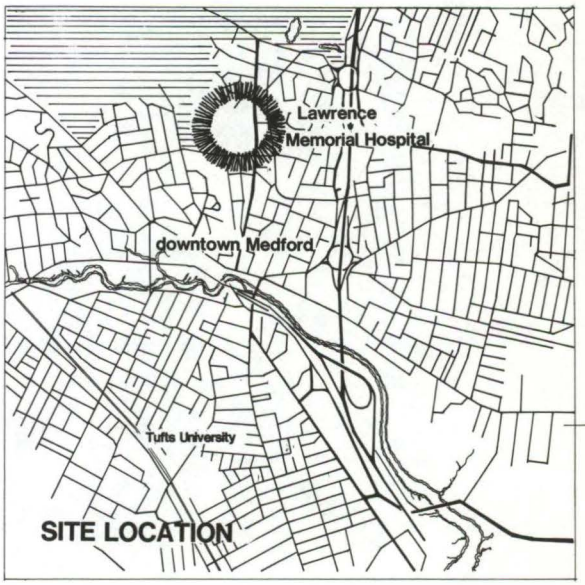
cooperative care:

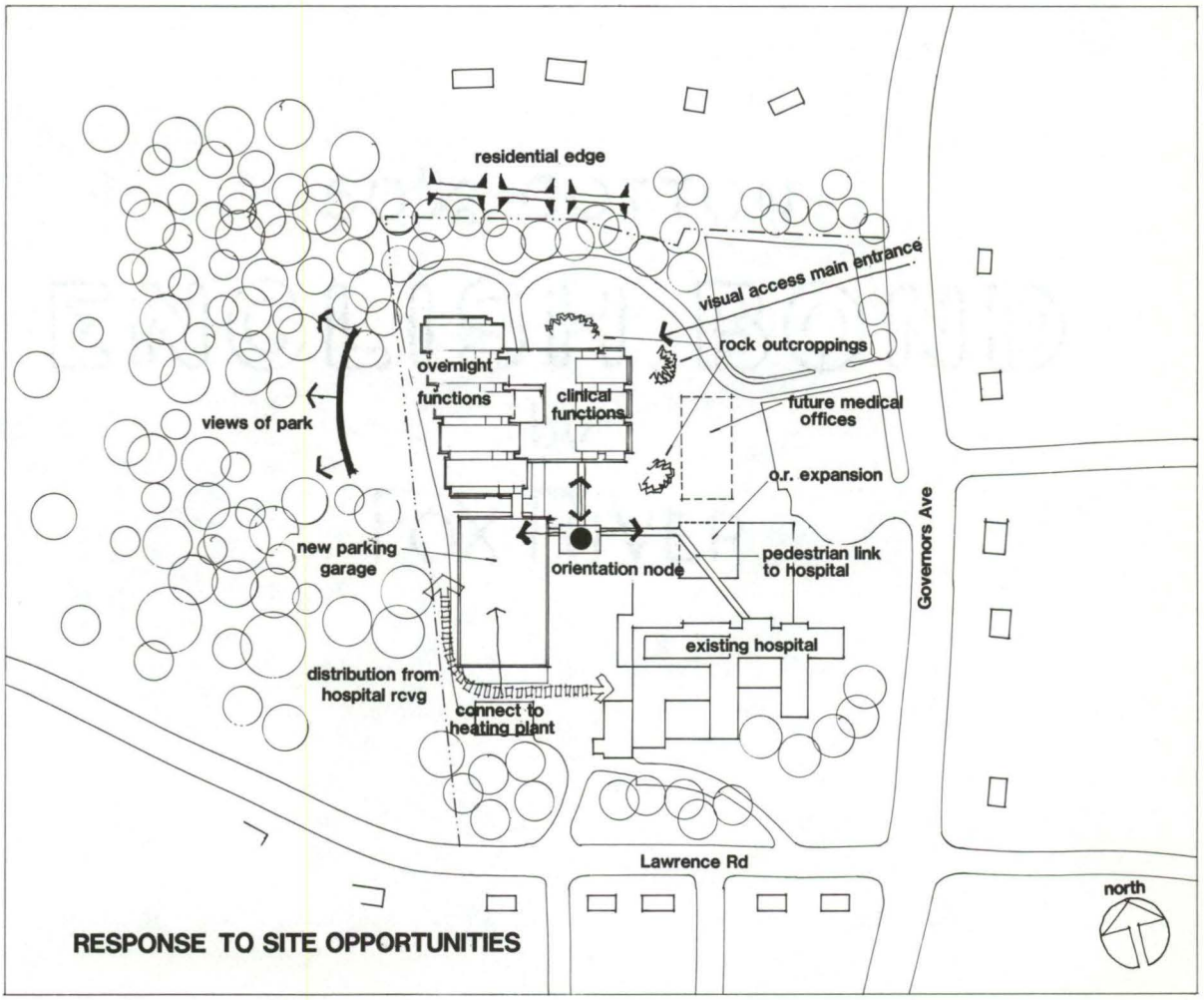
An overnight accommodation for acute medical care which promotes recovery to wellness through a cooperative effort between the client and , his companion, and multidisciplinary health care team care by emphasizing client & companion education .

The New England Eye CENTER

A new facility for treatment and surgery of eye disorders which serves as a point of induction for new developments in the field of ophthalmology.

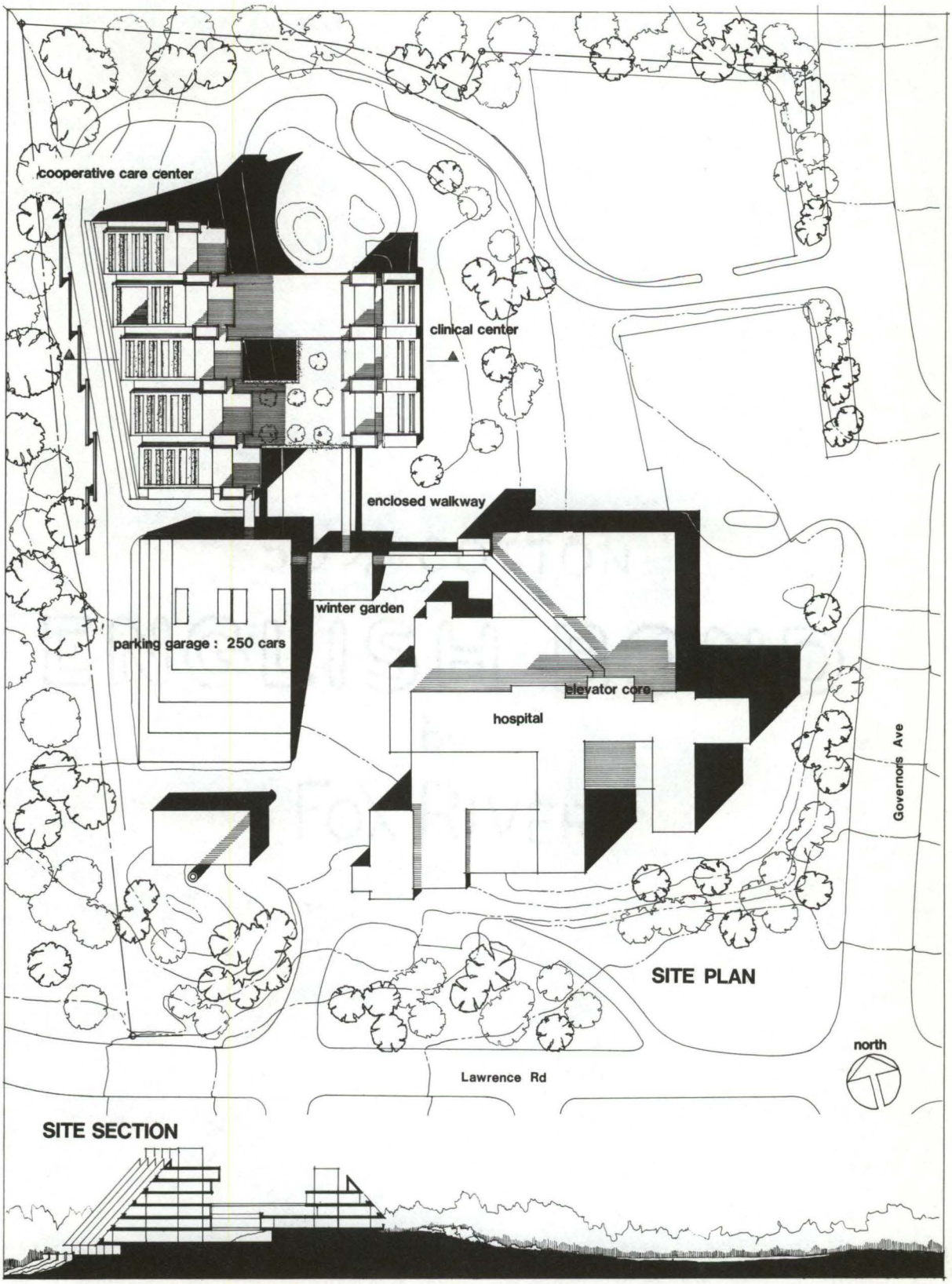

Melrose
Saugus
Medford
site
Malden
Revere
Somerville
Rte 93
Everett
Cambridge
Logan International Airport
Boston
Boston Harbor
REGION


Lawrence Memorial Hospital
downtown Medford
Tufts University
SITE LOCATION


residential edge
visual access main entrance
rock outcroppings
overnight functions
clinical functions
future medical offices
views of park
o.r. expansion
new parking garage
orientation node
pedestrian link to hospital
Governors Ave
existing hospital
distribution from hospital rcvg
connect to heating plant
Lawrence Rd
north
RESPONSE TO SITE OPPORTUNITIES

LOCATION

1

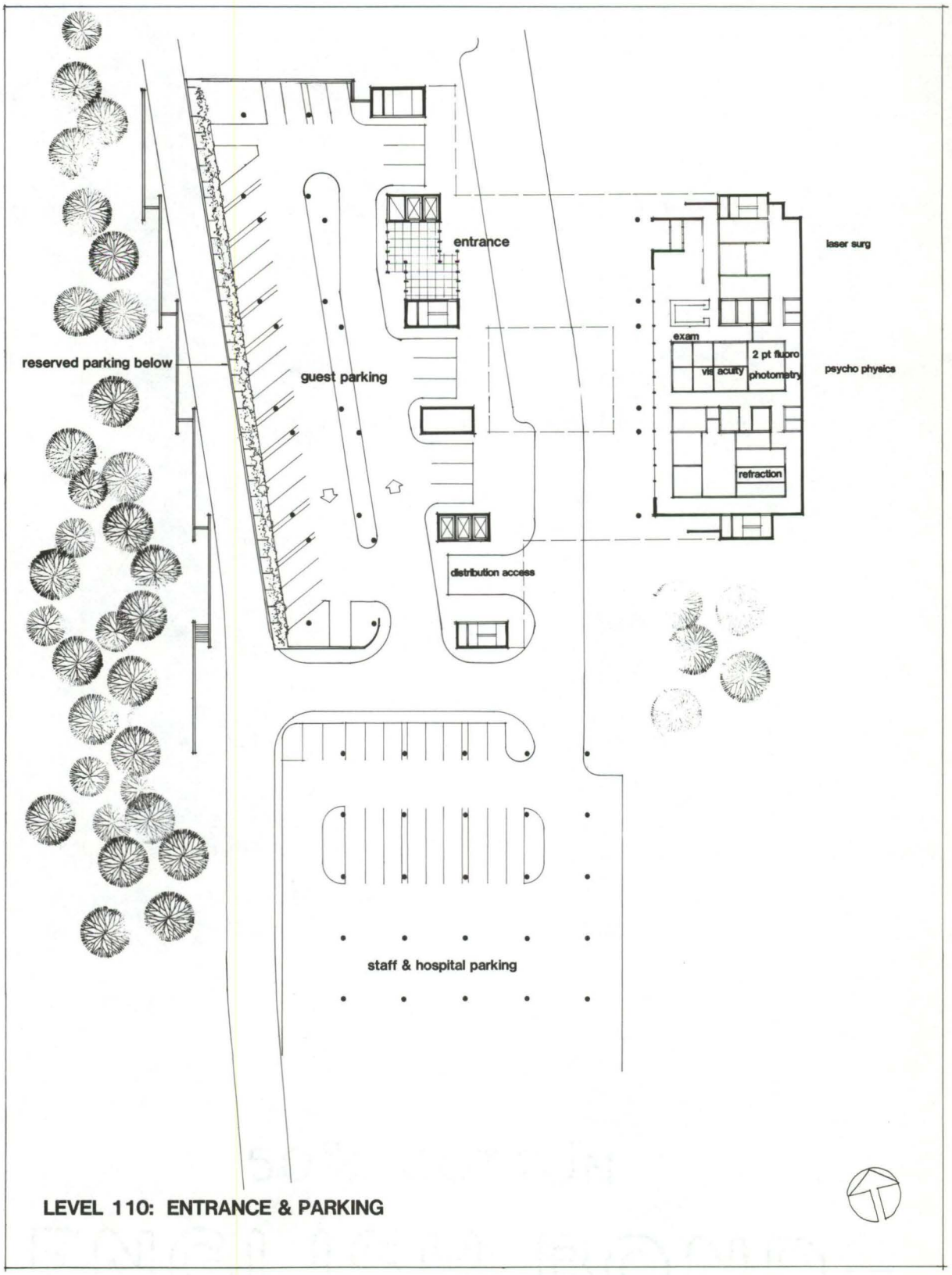


SITE

scale: 1" = 40'

0 20 40 80

2



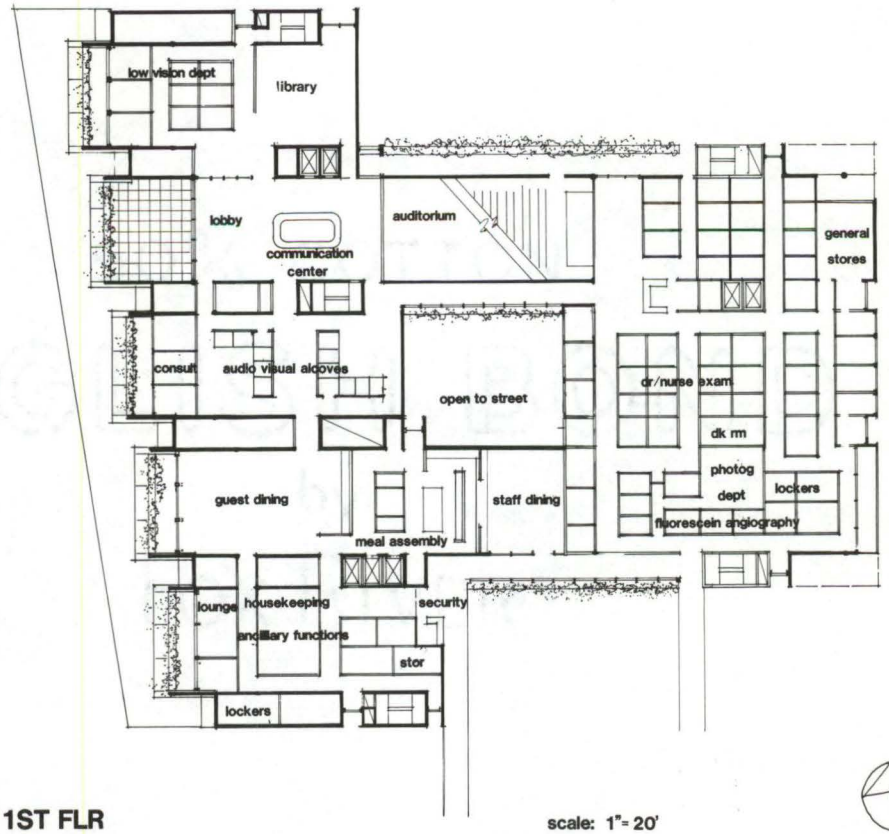
LEVEL 110: ENTRANCE & PARKING

PLAN

scale: 1" = 20'

0 10 20 40

3



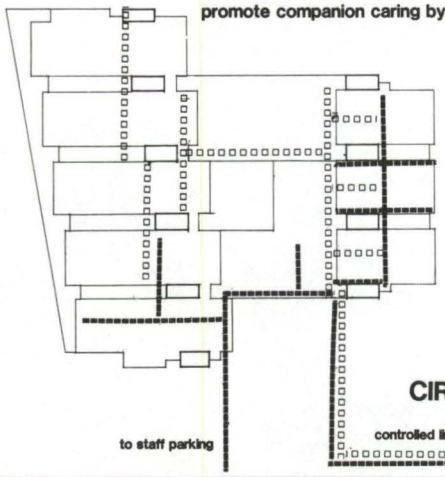
LEVEL 124: 1ST FLR

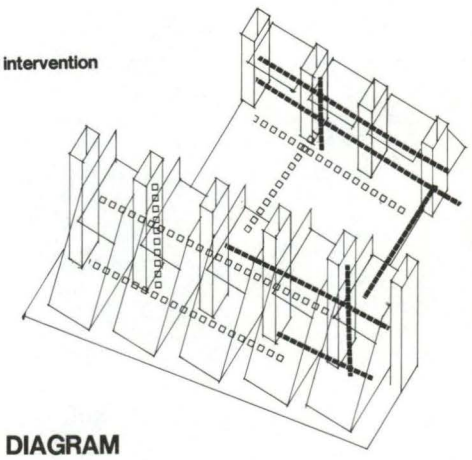
scale: 1"= 20'

guest flow

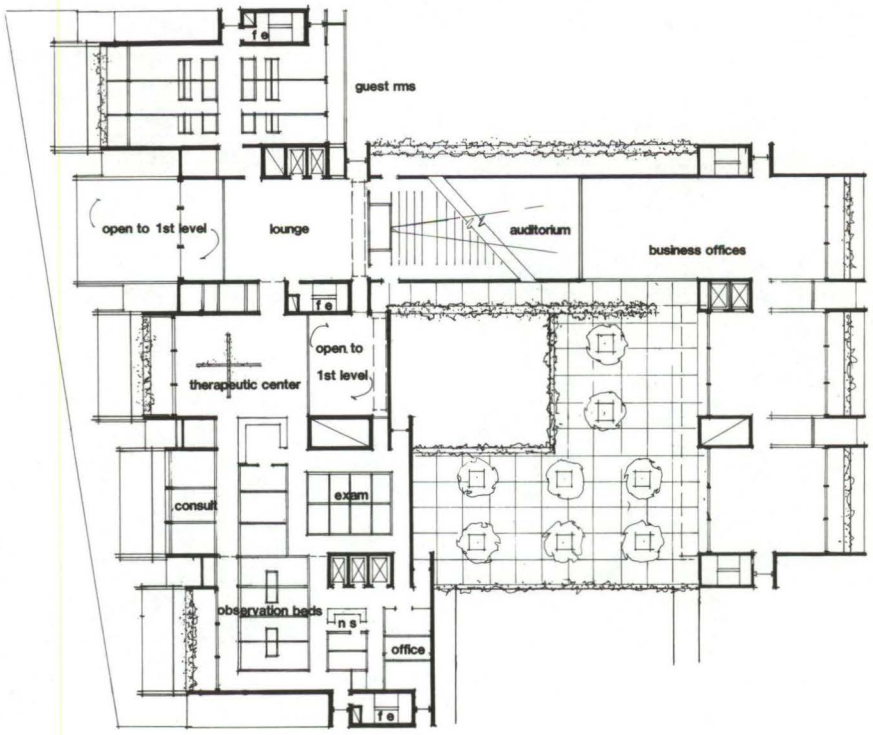
staff flow

promote companion caring by minimizing staff intervention



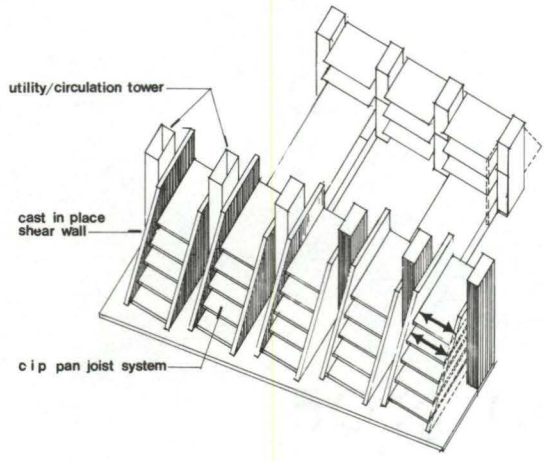


CIRCULATION DIAGRAM

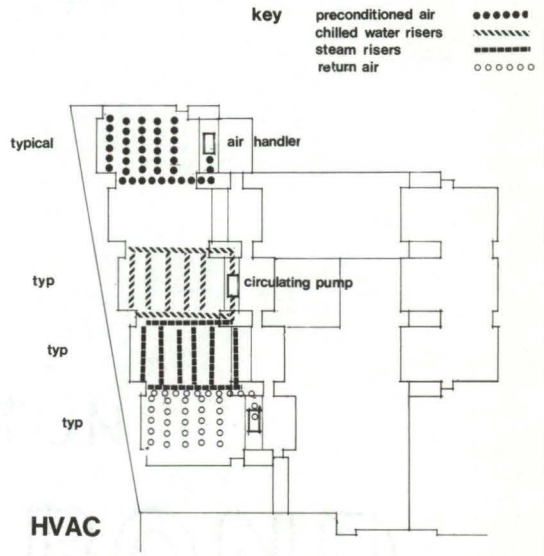


LEVEL 136: 2ND FLR

scale: 1" - 20'



STRUCTURE

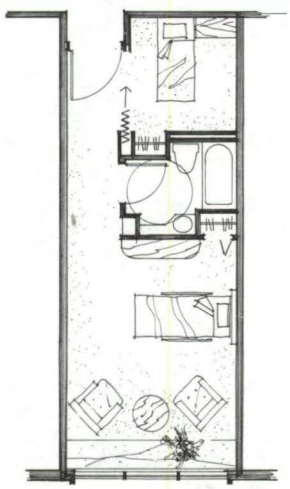


HVAC

north

LEVEL 148: 3RD FLR

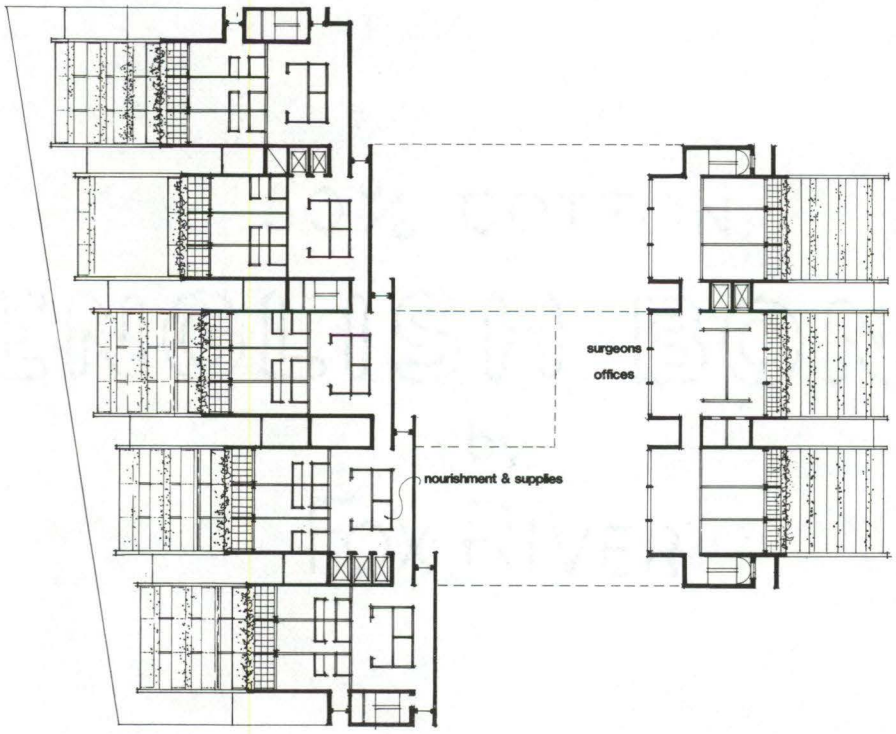
scale: 1" = 20'



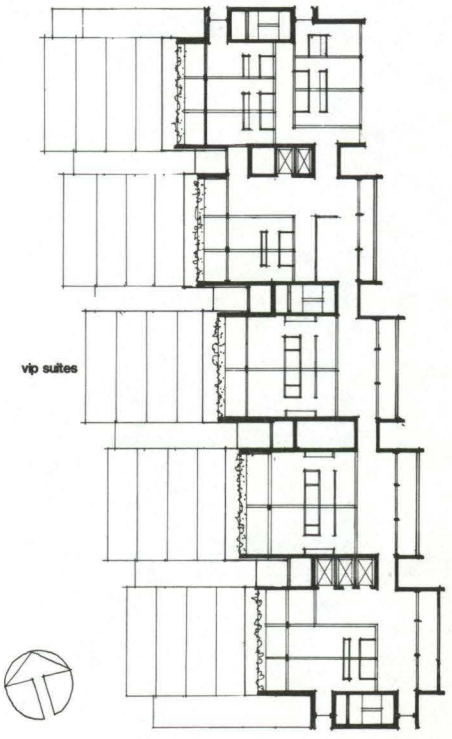
TYPICAL RM 3rd Floor

scale: 1/4" - 1'

TYPICAL RM
4th Flr



LEVEL 160: 4TH FLR



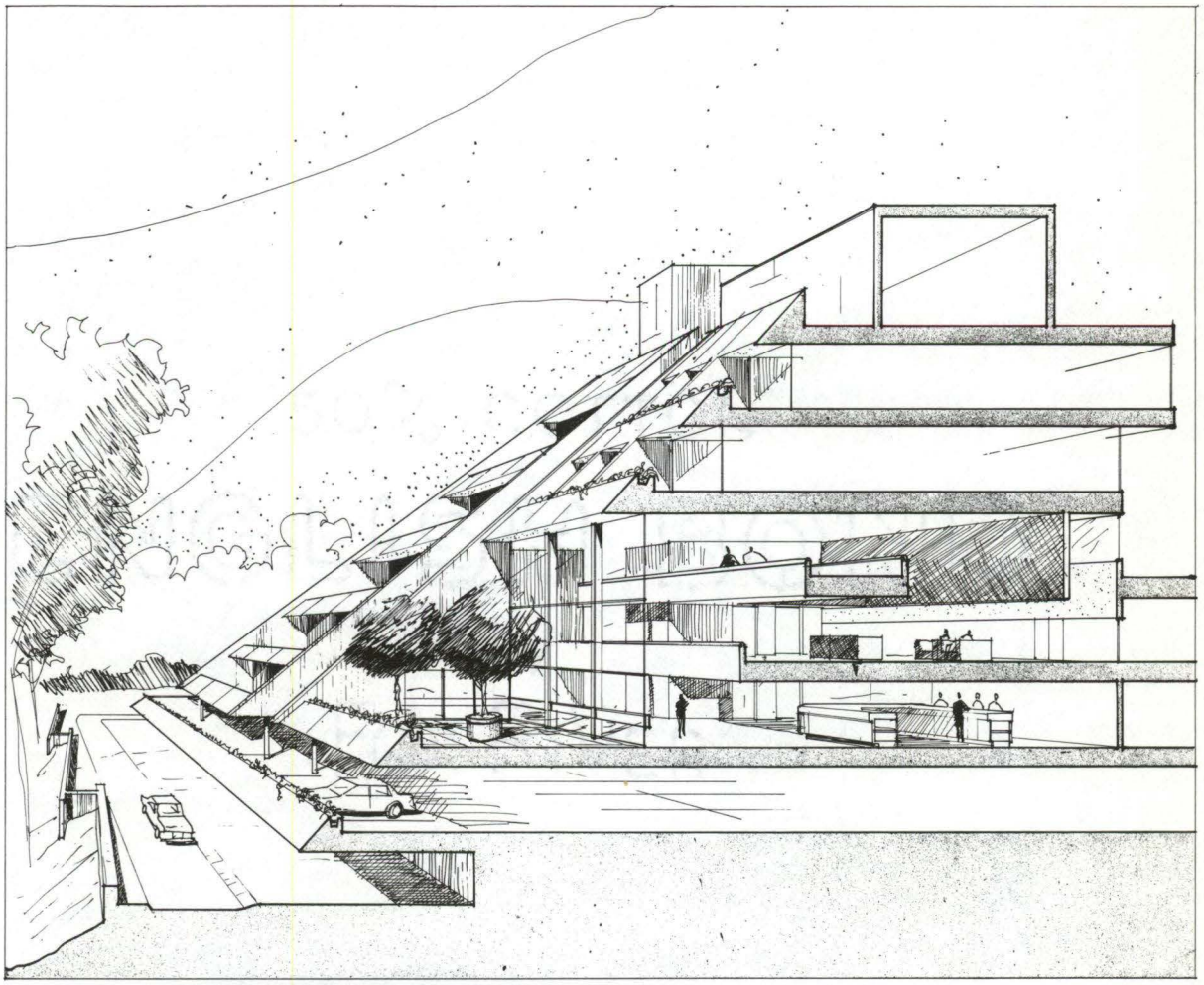
LEVEL 172: 5TH FLR

PLANS

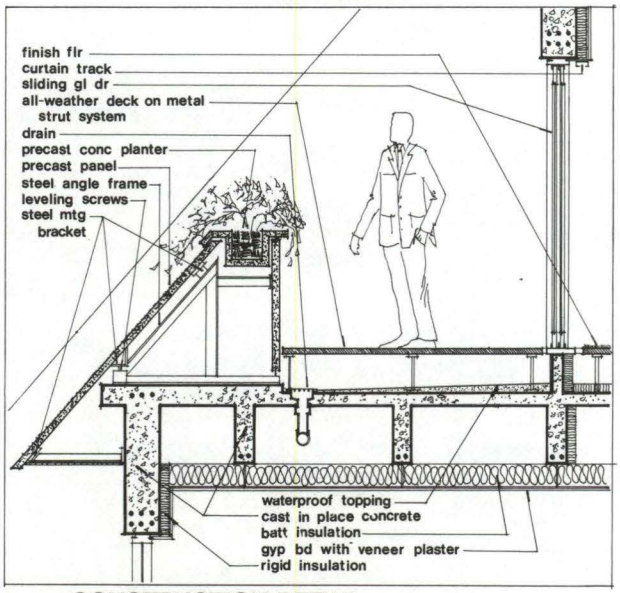
scale: 1" = 20'

0 10 20 40

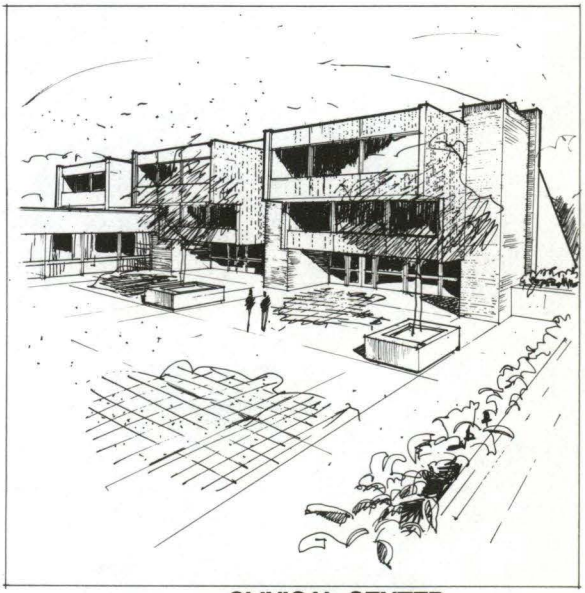
7



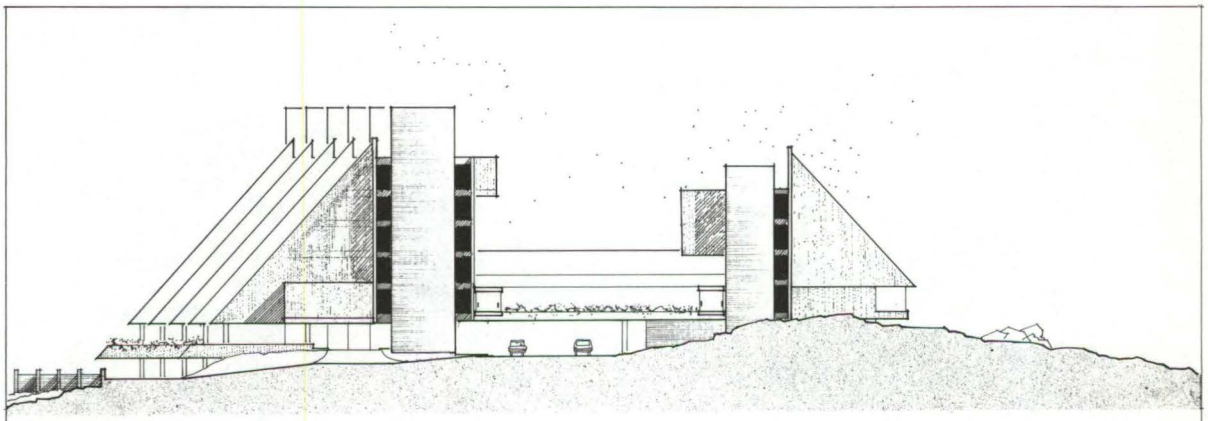
SECTION PERSPECTIVE THRU LOBBY



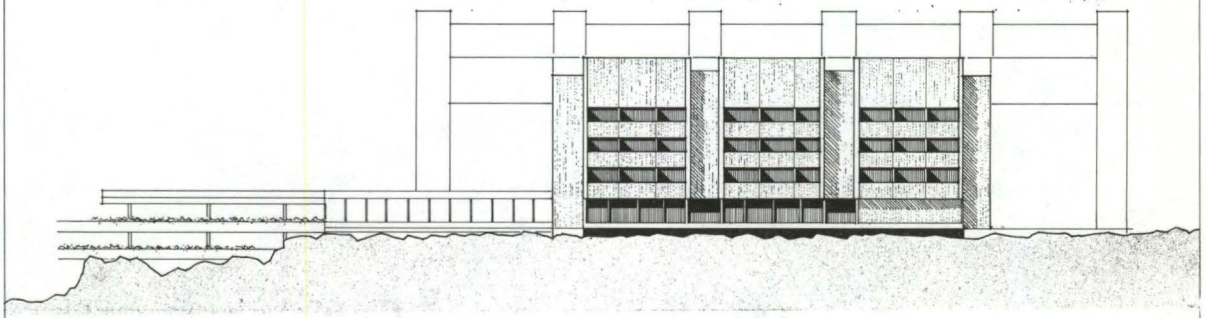
CONSTRUCTION DETAIL



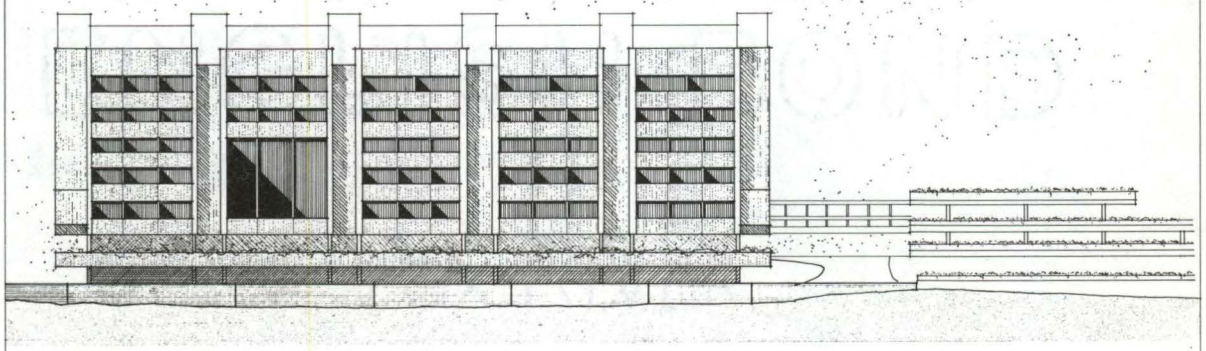
CLINICAL CENTER



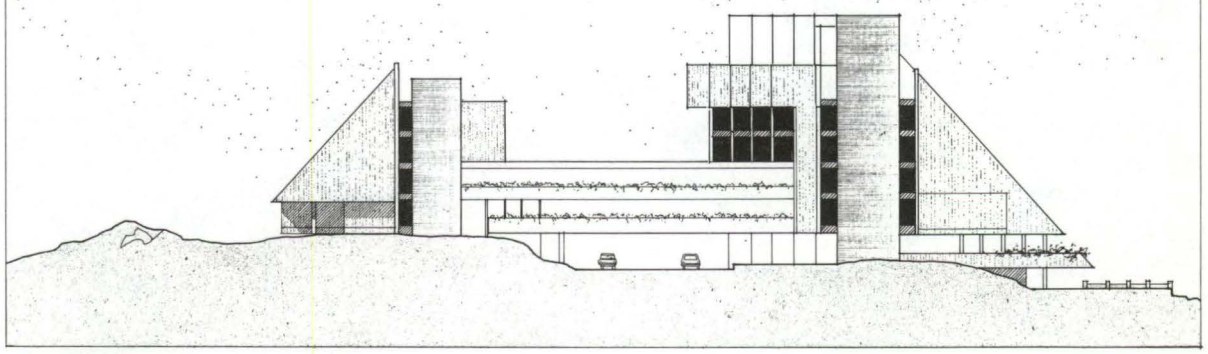
SOUTH



EAST



WEST



NORTH

ELEVATIONS

scale: 1" = 20'

9

OVERVIEW OF THE PROJECT

THE PLANNING & DESIGN PROCESS

Given the belief that people can participate in a joint effort with health care providers in their quest to overcome illness, the same spirit may apply to the relationship between the architect and those who inhabit the buildings he designs. Ideally, the people who choose to devote much of their time, striving to be productive and to enjoy the fruits of life, within the walls of a building should be its designers. The architect's role should be one of applying his skills and knowledge to the creative process of transcribing the client's needs into the three dimensional realm of a building.

This philosophy of design can only be brought about through a careful process of communication between the architect and his clients. The principles of this approach are represented in figure 1 .

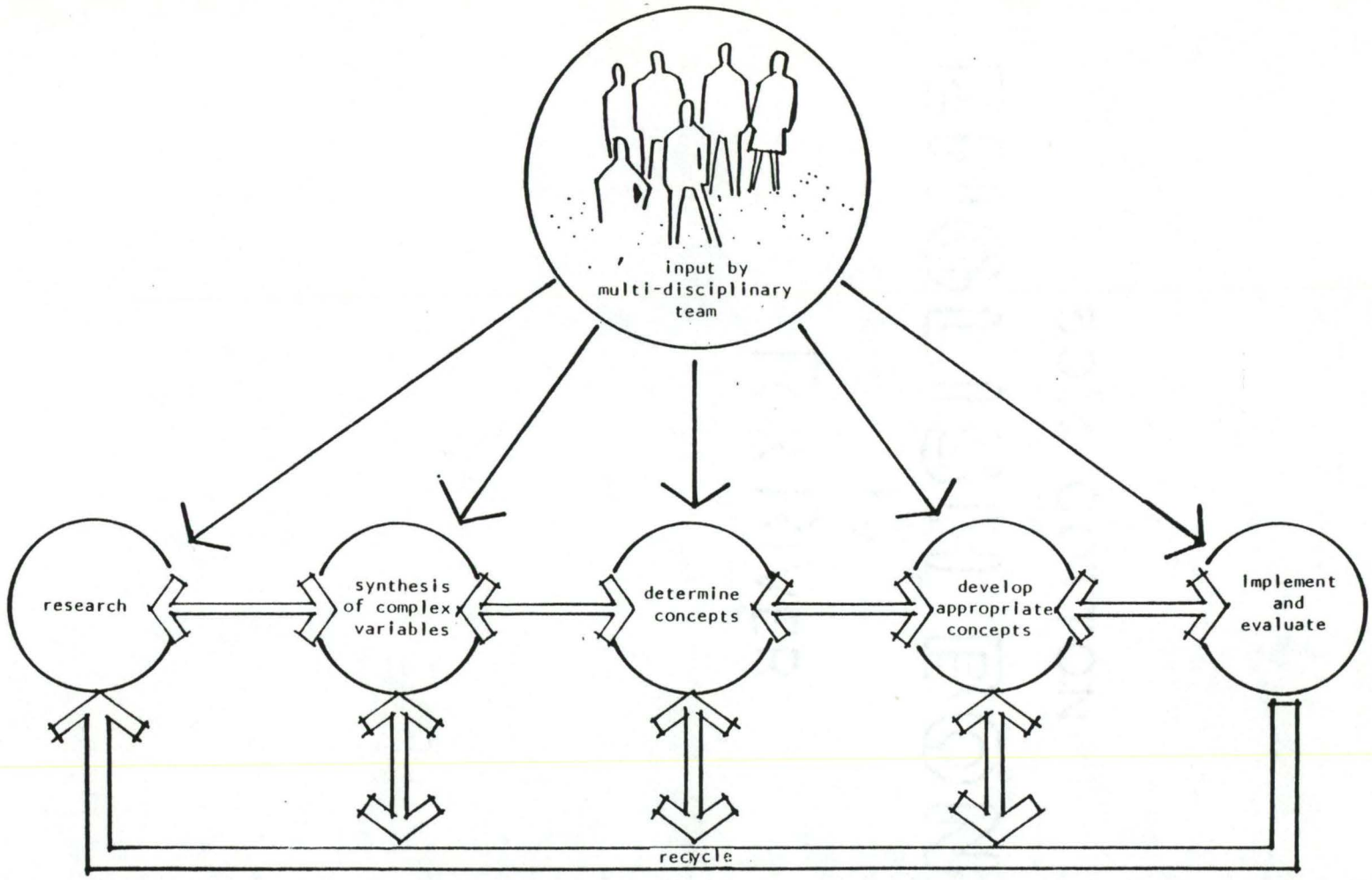


figure 1: the planning and design process

The architectural solution toward which this process is directed, for the proposed New England Eye Center, is not conceived as the only viable solution to the many and varied needs of the clients. Instead, it is one option, among several, which addresses the issues and input from the multi-disciplinary team of professionals in the field of ophthalmology. This option places emphasis on the needs of the recipients of treatment and surgery which are unique to the proposed New England Eye Center. Therefore, the proposal for integrating cooperative care with the existing program of activities is the focus of this project.

BACKGROUND

The proposed New England Eye Center is a hypothetical solution derived from an existing network of facilities in center city Boston, Massachusetts: Retina Associates and The Eye Research Institute of Retina Foundation. Both institutions are recognized internationally as leaders in the field of ophthalmology.

Retina Associates, Inc., established in 1951, is a group of ten ophthalmic surgeons who specialize in diagnosing and treating conditions which affect the posterior segment of the eye. As innovators of surgical techniques the Retina Associates provide a tertiary level of care for their clients, who, for the most part, are seen on a referral basis. While diagnostic functions take place in the surgeons' offices, which occupy three floors of a large commercial office building, clients receive surgery at the Massachusetts Eye & Ear Infirmary, several blocks away.

The Eye Research Institute, founded in 1950, is a scientific research facility and is considered to be one of the largest and most productive non-profit, medical research institutions in the United States. All the associates hold appointments in the faculty of the Eye Research Institute.

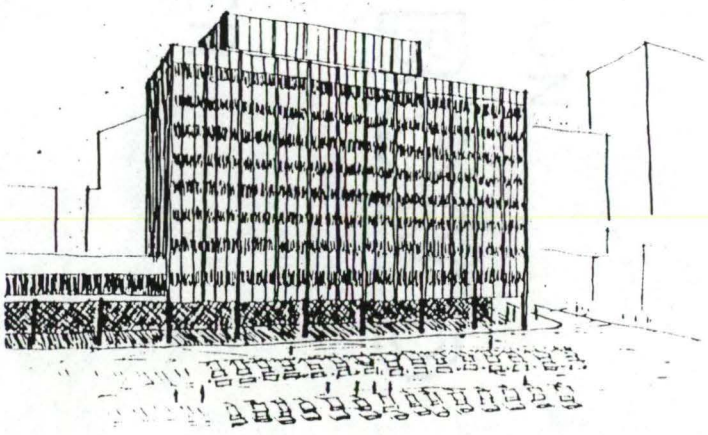


fig. 2: existing eye care facility occupies 3 flrs. of a commercial office bldg.

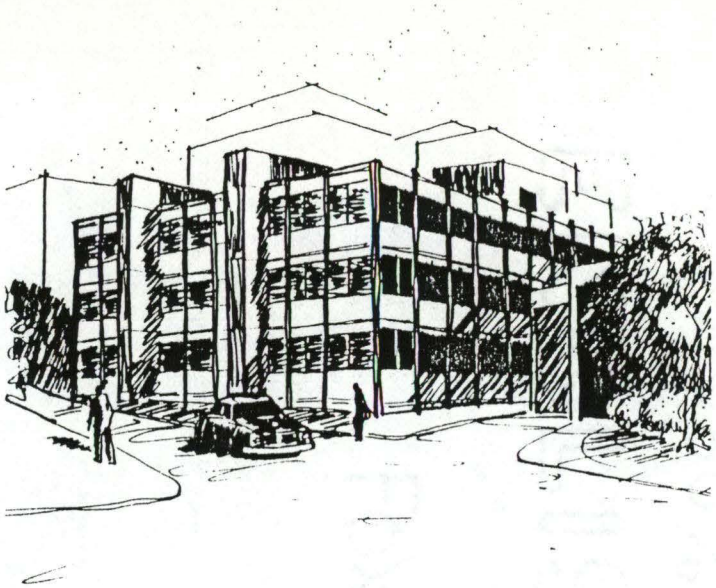


fig. 3: the Eye Research Institute

As a result of this relationship, Retina Associates is in a position to disseminate many of the advances in the cause to prevent blindness into the general health care delivery system. However, Retina Associates is unique in that most other eye centers of this magnitude are housed in a facility which brings together diagnostic functions with research and surgery.

The ten principal surgeons are assisted by a staff of over 100 professionals, among whom are optometrists, nurses, photographers, medical artists and the full cadre of people who manage the activities associated with the business of operating a large medical practice.

In addition to the medical practice, Retina Associates serves as a teaching center, offering a number of fellowships to ophthalmic residents for advanced study and practice. These surgeons participate in the daily activities of the practice and conduct research as well.

Over the years the Associates have made outstanding contributions to the development of diagnostic procedures and surgical techniques. These achievements are the product of a machine shop that serves as an ancillary extension of the two facilities. Occupying part of a townhouse, several blocks

from the medical practice and the research facility, the shop has produced some highly sophisticated prototypes for instruments which are familiar to ophthalmologists the world over. Some of these include: the Schepens Indirect Binocular Ophthalmoscope; such precision instruments as vitreous scissors, an inflatable intraocular "balloon", and instruments for removing cataracts, as well as such innovations as an upside-down operating table.

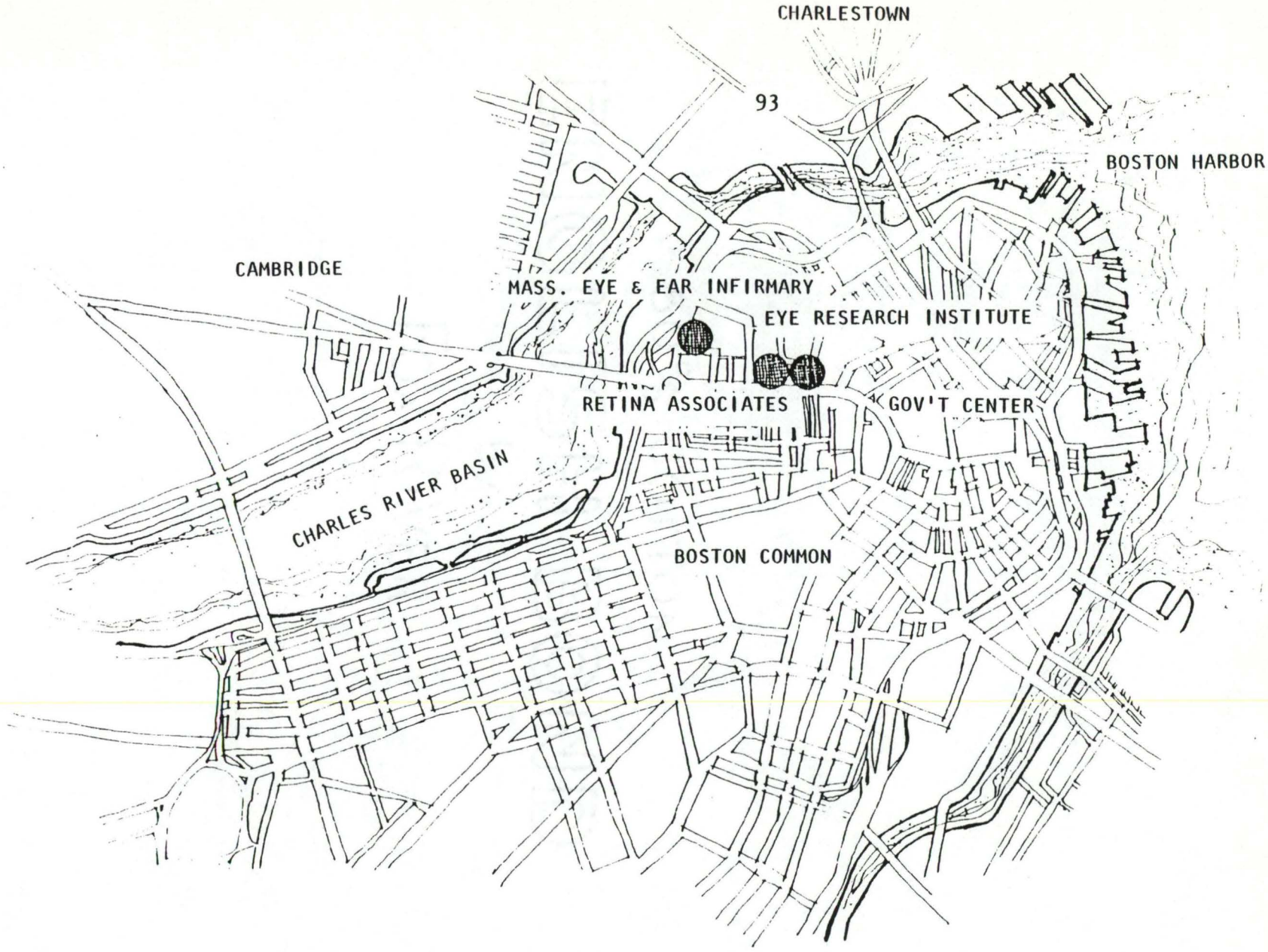


fig. 4: locations of existing facilities

SERVICE RECIPIENTS

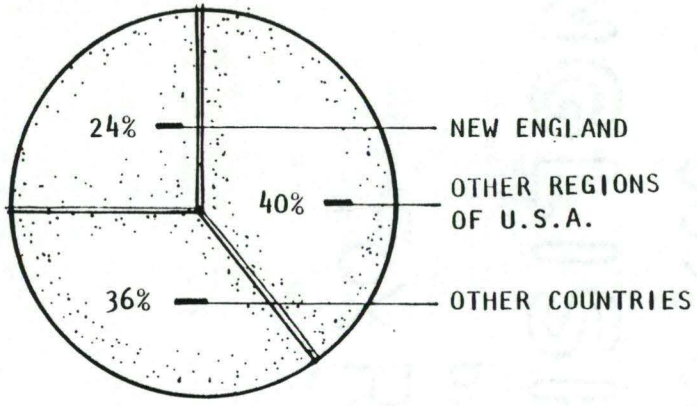


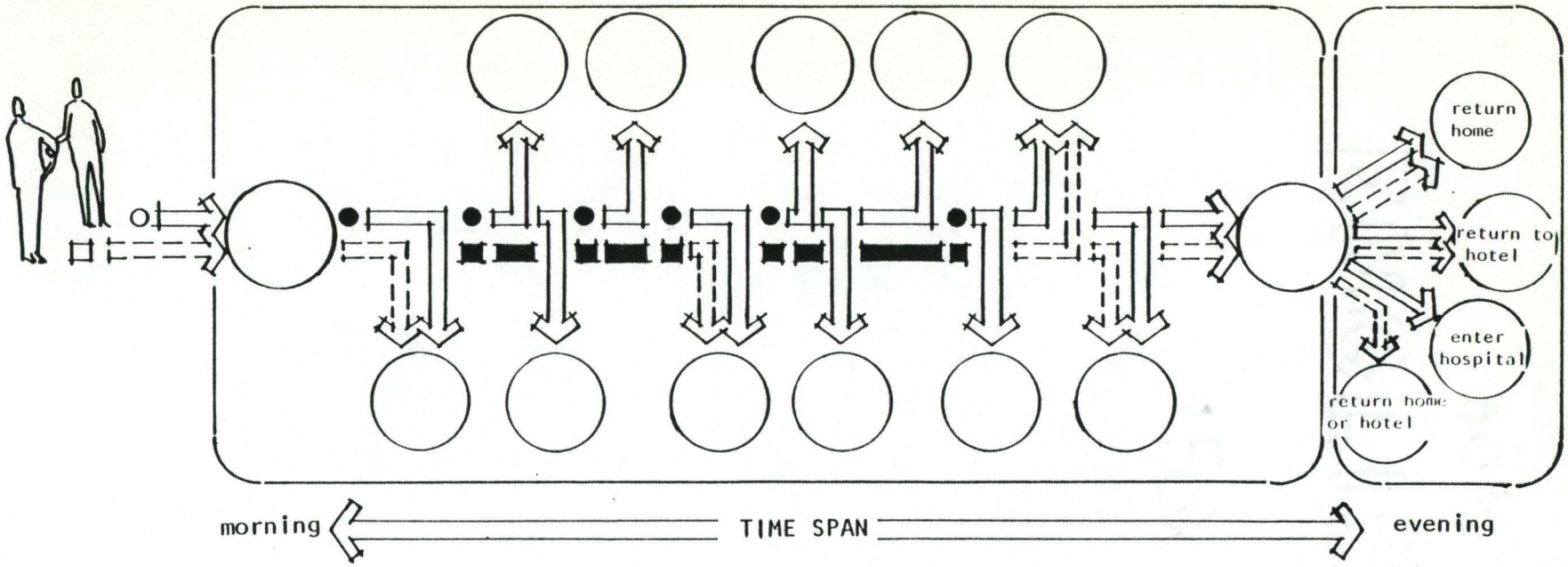
fig. 5: client source

Approximately 20,000 people visit the Associates each year for examinations and other health care services. A majority of these clients come from distant places, as indicated in figure 5. Because many clients are from foreign countries, it is necessary for some to have a companion who can also serve as a translator. Also, nearly 75% of the clients are over 65 years of age. Therefore the problems of orientation which accompany impaired vision are often compounded by the problems of mobility that develop with advancing age. This group of people also benefit from the help that a spouse or other companion may provide.

Another group of clients who place special requirements on the facility are the many heads of state and other dignitaries who come to the facility for treatment. In addition to the fact that many arrive with a retinue, they look for a level of security which is associated with their positions.

EXISTING CARE SEQUENCE

Because of the nature, and complexity, of many of the clients' eye disorders, it is difficult for the surgeons to anticipate exactly how many tests are indicated prior to the client's visit. As the facility utilizes a broad range of diagnostic procedures, typically a client may spend an entire day there. This means that the client, and especially his or her companion, may spend a good part of the day waiting between tests and for results. Figure 6 illustrates the existing sequence of activities typical of a client's day.



SYMBOL KEY

client path

companion path

alternate path

client waiting

companion waiting

client/companion activity

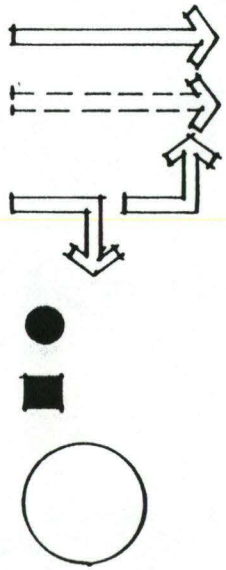


fig. 6: existing care sequence

USER NEEDS

It is said that the process of developing an architectural program is one of "problem seeking," and that the process of creating an architectural design solution is one of "problem solving." In order to ascertain a range of problems, or issues, I made two visits and a number of telephone calls to Retina Associates, recording the issues as they arose during interviews and conferences with the multidisciplinary team of administrators and health care professionals. The issues represent existing needs which apply to the service providers as well as the service recipients. They are arranged categorically in columns with the highest priority issues at the top.

Many of the issues are difficult to quantify, but are no less significant in the process of determining what kind of architectural environment is suitable. People with severe visual impairments are more inclined to experience anxiety in an unfamiliar environment. This can be ameliorated by the proper environment, or exacerbated by a poor environment. Such things as lighting glare and color schemes must be carefully controlled as these greatly effect vision. Glare can cause increased pain for those with certain painful eye

disorders. For people with low vision, the contrast of white walls and black trim helps with orientation more than subtle color schemes. Many of the aides to orientation that people with normal sight take for granted, such as signage, can be a source of great frustration for people with visual impairments. Therefore, in addition to the typical anxiety one experiences when visiting any doctor's office, the client of an eye surgeon has a set of psychological needs that are unique to eye conditions.

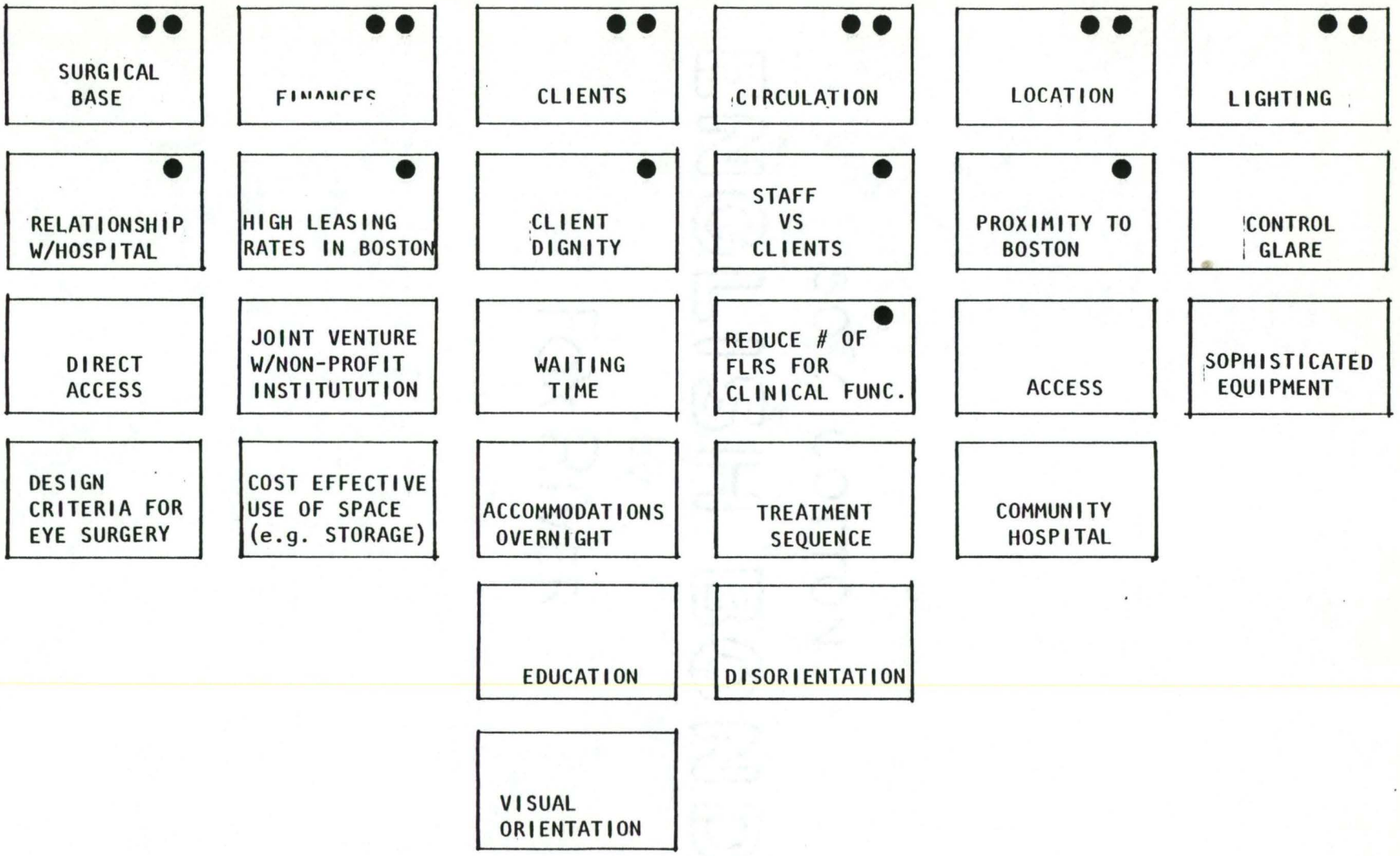


fig. 7: the programming issues

CONCLUSIONS

Administrators of Retina Associates identified three basic planning options:

1. Remain in existing facility and undertake comprehensive alterations.

2. Build a new, autonomous complex which would integrate all the existing research and development programs with the clinical practice. The new facility would include complete surgical facilities as well as inpatient services.

3. Pursue a joint venture with an established acute care hospital, utilizing as many existing hospital services as would be of mutual benefit. The Eye Research Institue would remain at its present location.

Option #3 has been selected as the one that holds the most potential with respect to the programming issues. (the advantages and disadvantages of each option are summarized below)

A survey of community hospitals in the metropolitan Boston area suggests that Lawrence Memorial Hospital in Medford could be a suitable institution for option #3. The architectural proposal for the New England Eye Center illustrates the size of the proposed facility, its access and parking needs, and shows how it can relate to the hospital masterplan. If the proposal satisfies the criteria set forth by the hospital then this study can give an indication of how the hospital may benefit from the new facility.

PLANNING OPTION	DISADVANTAGE	ADVANTAGE
1. Remain at existing location	continuity of services during construction share elevators etc. with other groups high lease lack of expansion space	expedient short term solution no interruptions for moving into new facility
2. New complex , integrating all existing programs	would require vacating existing research building most capital intensive anxiety instilled in clients by presence of research functions would require redefining "profit" and "non-profit" distinctions of surgical practice and research institute	convenience of adjacency between research and clinical/surgical activities opportunity for greater latitude in planning cohesive image
3. Joint venture with established hospital	distance between medical practice and research institute initial capital outlay problem of maintaining image as distinct from host hospital	lower lease rates due to host institution's non-profit status etc. opportunity to utilize existing hospital services opportunity to expand services and add new services to complement existing economic operating expenses due to joint venture with hospital

fig. 8: the three planning options

There is an opportunity to address many of the eye care clients' needs within a cooperative care program. By locating the overnight accommodations adjacent to the diagnostic and treatment functions, the eye center can encompass a broader spectrum with regard to a health care continuum. This arrangement makes it possible to introduce a process of education and therapy that augments medical treatment, which the client and the companion can begin upon arrival to the center. By producing a stimulating, but supportive, environment it will be possible to mitigate the fear of going to a hospital for surgery with the fun of a hotel-like setting that is manifest in the proposed cooperative care facility.

PROPOSAL OF FACILITY CONCEPTS

DEFINITION OF COOPERATIVE CARE

Cooperative Care is a fairly new approach to inpatient care, conceived in the late 1960s by Irv Wilmot, who was then chief executive officer of New York University Medical Center. The concept is a departure from the typical acute care arrangement because the client stays at the facility with a companion, who may be a spouse, other relative, or friend. The companion plays an active part in the client's daily regimen of care by monitoring vital signs, administering certain medications, changing dressings and linens, charting data, and by performing a number of other tasks normally assumed by nursing and housekeeping personnel. In fact, both the client and his or her companion take part in a cooperative effort along with the physician, nurses, dietician, counselors and therapists, and any others who may be part of a multi-disciplinary health care team. The client and companion undergo an educational process during their stay which enables them to assume a number of responsibilities thus alleviating a large portion of the time spent on nursing care characteristic of an acute care unit. Not only does this approach foster a sense of self-motivation to become well, it better prepares client and companion to manage the illness and recovery upon leaving the hospital.

In its few years of operation, since 1979, the cooperative care unit at New York University Medical Center has yielded a cost savings in the range of 40% compared to conventional acute care inpatient accommodations. This reduction in costs is largely attributable to a reduction in nursing personnel and a number of other operating expenses. The overall employee-bed ratio may be reduced from 4.2:1, typical of acute care, to 1.6:1 for cooperative care.[3] Furthermore, the time for nursing care can be reduced from about eight hours a day to about 3 hours a day. Because the guests go to a therapeutic center for nursing care there is no need for nursing stations on all inpatient floors.

Although guest rooms may appear more luxurious, more like hotel rooms, than traditional hospital rooms, it is possible to charge significantly less. While two people stay in a room or suite, rates may be based on a single occupancy. In fact, at the 190 bed Halstead, Kansas, Hospital, during a six month trial period, guests of the 38 bed "hotel" unit were charged nothing for lodging. But it proved to be a very successful marketing tool inasmuch as 75% of the 600 guests using the facility were new to the hospital. Those 600 guests

generated over $750,000 in revenue.[4] Clearly there is not only an opportunity for The New England Eye Center to provide a comprehensive service to its clients, but also for Lawrence Memorial Hospital to attract clients who would ultimately generate a good financial mix.

COMPARISON BETWEEN COOPERATIVE CARE AND TRADITIONAL ACUTE CARE

Area	Traditional Hospital Care	Cooperative Care
Patient Characteristics		
Medical stability	• Entire spectrum including those who require intensive nursing care	• Medically stable patients
Functional status	• Ambulatory and non-ambulatory	• Patients who are ambulatory or able to go to services with aid of a partner
Type of diagnosis	• All Diagnoses	• Most diagnoses, suitability dependent on medical stability and functional status
Services		
Physician	• Patients are treated on rounds	• Patients are seen by appointment in the therapeutic center
Nursing	• Provided in patient rooms by the nursing staff	• Provided in the therapeutic center or by care partner in patient room
Health education, nutrition and pharmacy consults	• Generally lectures or independent consultants	• Multi-disciplinary consults, group programs, audiovisual presentations
Food Service	• Patient rooms	• Cafeteria
Facility		
Patient Rooms	• Fully equiped hospital room	• Hotel-like rooms for the patients & their care partners
Nursing Station	• Located on each floor	• One station as part of the therapeutic center

source: DeWayne L. Oberlander/EWING COLE CHERRY PARSKY, 9/82

fig. 9: comparison of cooperative care and traditional acute care

NEED FOR MEDICAL PROTOCOL

Cooperative care lodgings may not be appropriate for all clients. Recipients of very complex surgery of giant retina tears, for example, experience a good deal of pain, must be kept immobile, and require a great deal more intensive nursing care than others. These people would stay in the existing hospital.

Utilization of the facility may fall into several categories, so that each guest may find the appropriate level of care. Options can vary according to length of stay indicated by the treatment mode or severity of surgery. One may arrive at the center, spending the first day in diagnostic and educational functions, then spend the night in the co-op center with a companion, and thereafter stay in the hospital following surgery. The companion may choose to stay in the co-op center as a hotel guest until it is time to return home with the client.

Cooperative care beds may work advantageously when used on a "step-down" arrangement from the more costly acute care beds. Not only can the cost of stay be reduced considerably, there is also evidence that the length of stay may diminish due to the inherent motivational factors of the program. Staff

at the NYUMC cooperative care unit observed that clients develop a more positive self-assessment and consequently feel more confident about recovering earlier.[5] Also, and perhaps more importantly, they are better prepared for an early discharge because the caring process helps them overcome the feelings of vulnerability and helplessness that often hinder a hospital inpatient.

The past five years have been marked by a continued trend to increase ambulatory surgery and decrease utilization of acute care beds following surgery. Indeed, third party payers are encouraging this trend, even though five years ago they were reluctant to reimburse clients for many outpatient surgical procedures on the grounds that they were viewed as experimental. Today, such procedures are assumed to take precedence over inpatient surgery.

With regard to the paradigm of Progressive Patient Care, which has evolved continuously since its inception in the early 1960s, cooperative care may be viewed as an intermediary between intensive care at one extreme and home care at the other. But before regulatory agencies can establish guidelines for licensing these facilities, health care providers must determine what diagnoses are appropriate for their use.

potential for cooperative care indicated in shaded areas

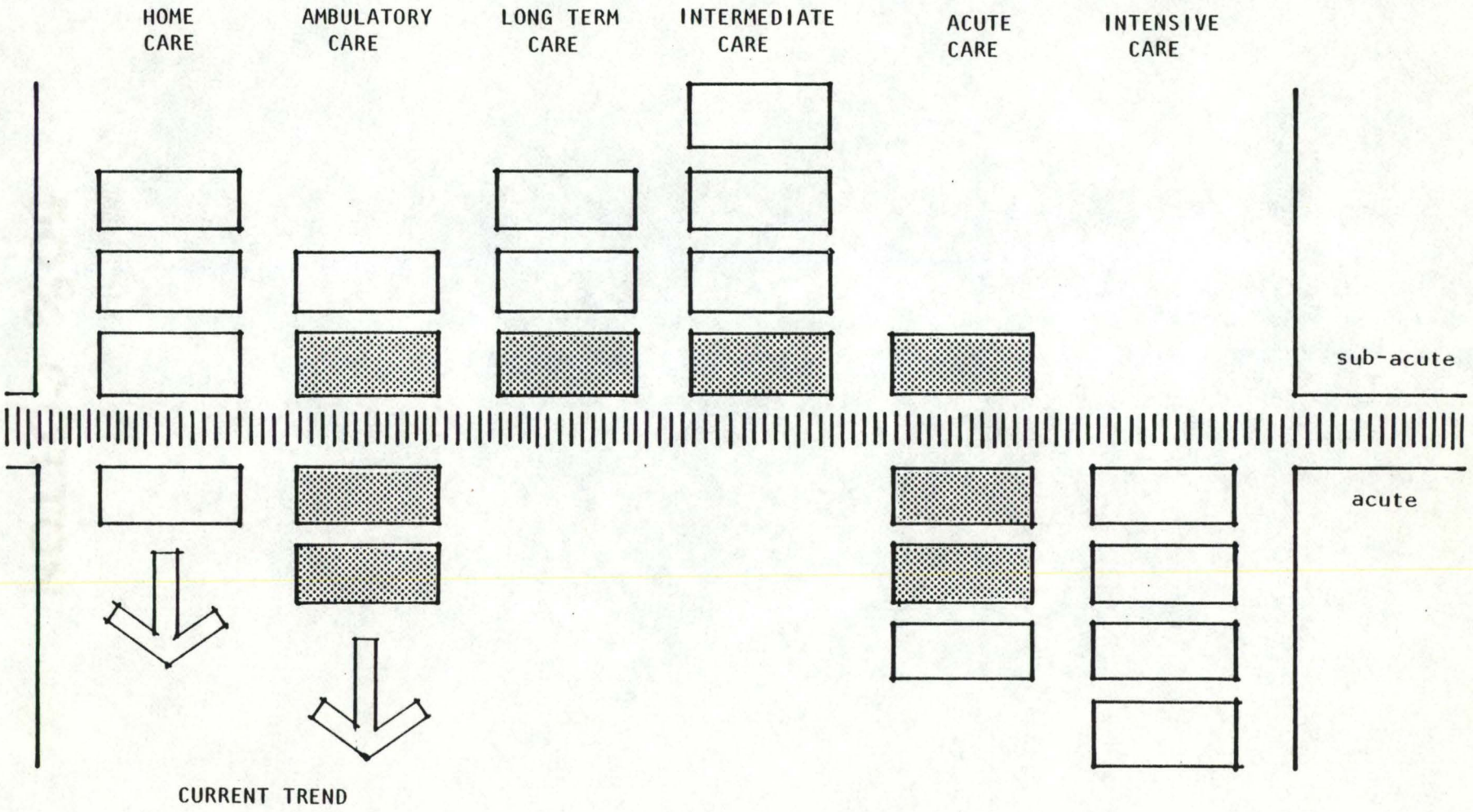


fig. 10: cooperative care and the progressive patient care paradigm

FUNCTIONAL COMPONENTS

The cooperative care facility consists of four principle components:

1. Education Program
2. Therapeutic Program
3. Dietary Program
4. Guest Rooms

Education Program

The education program augments the daytime activities of the clinical services. Upon arriving to the building, clients go to a communications center and register. This center not only serves as a control point for guests to check into rooms, its personnel help with coordinating the clients' schedule of activities during their entire visit, assuring continuity of services. From the communications center, the client goes to receive diagnostic and testing procedures from the surgeons and staff.

Between tests the client and companion may spend time learning about their eye treatment and what to prepare for during their ensuing stay at the center in a series of multi-media presentations made with audio-visual equipment in small alcoves.

Another service in the education program is the low vision rehabilitation center. Those people with seriously impaired

vision, or for whom eye surgery is not a viable option, can find help from a group of specialists who develop optical aids to preserve or improve remaining sight. A library provides general literature for the facilities guests as well as material with large print for the partially sighted clients.

An auditorium completes the educational program. This would serve not only the cooperative care facility but also the various educational events held by the surgeons as well as any activities for which the hospital may need a large auditorium. Lectures and movies may be scheduled for the auditorium.

Therapeutic Program

Because nurses do not make rounds to clients rooms, clients visit the therapeutic center on an appointed schedule for exams, to pick up medicaiton and other supplies and to turn in charts filled out by the companion. Guests also meet with the dietician various therapists, and the pharmacist for consultation. The surgeon also sees the client in the therapeutic center for follow-up consultations.

After surgery clients are taken to one of four observation beds for a period of less than twenty-four hours until they are determined medically stable. During this time of close nursing

observation companions are given an orientation to caring for the client during the remainder of the stay.

Dietary Program

Meals are served buffet or cafeteria style in the dining room. Room service is also available, at an extra charge, for those who wish to eat in their rooms. The dietician would be available to help guests in selecting menues. In addition to regularly schedule meals, the dietary program can also provide snacks and beverages for evening social gatherings that may be held in the guest lounge.

In order to ensure the highest quality meals, final cooking and serving arrangements would take place in the meal assembly area. But bulk foods would be broken down and prehandled in the hospital's dietary department so that a minimum of preparation and storage would occur in the co-op facility. Food can be delivered on a per diam or per meal basis from the main hospital.

Guest Rooms

The sixty guest rooms are designed to provide a range of options for clients. For the most part they are arranged to offer a secure alternative to the typical acute care room, with

provisions for the companion to come and go freely. Under normal conditions the rooms have all the features found in any fine hotel, but are outfitted to adapt to emergency situations.

The sloped west face of the building makes it possible to locate rooms on each succeeding floor depending upon those spatial needs dictated by the range of room types. For example, nurse available rooms, which are comparable to acute care in that nursing staff occupy the floor on a continuous basis, are located on the third floor which provides the depth needed for double loaded corridors. The VIP suites are at the top of the building where less depth is needed.

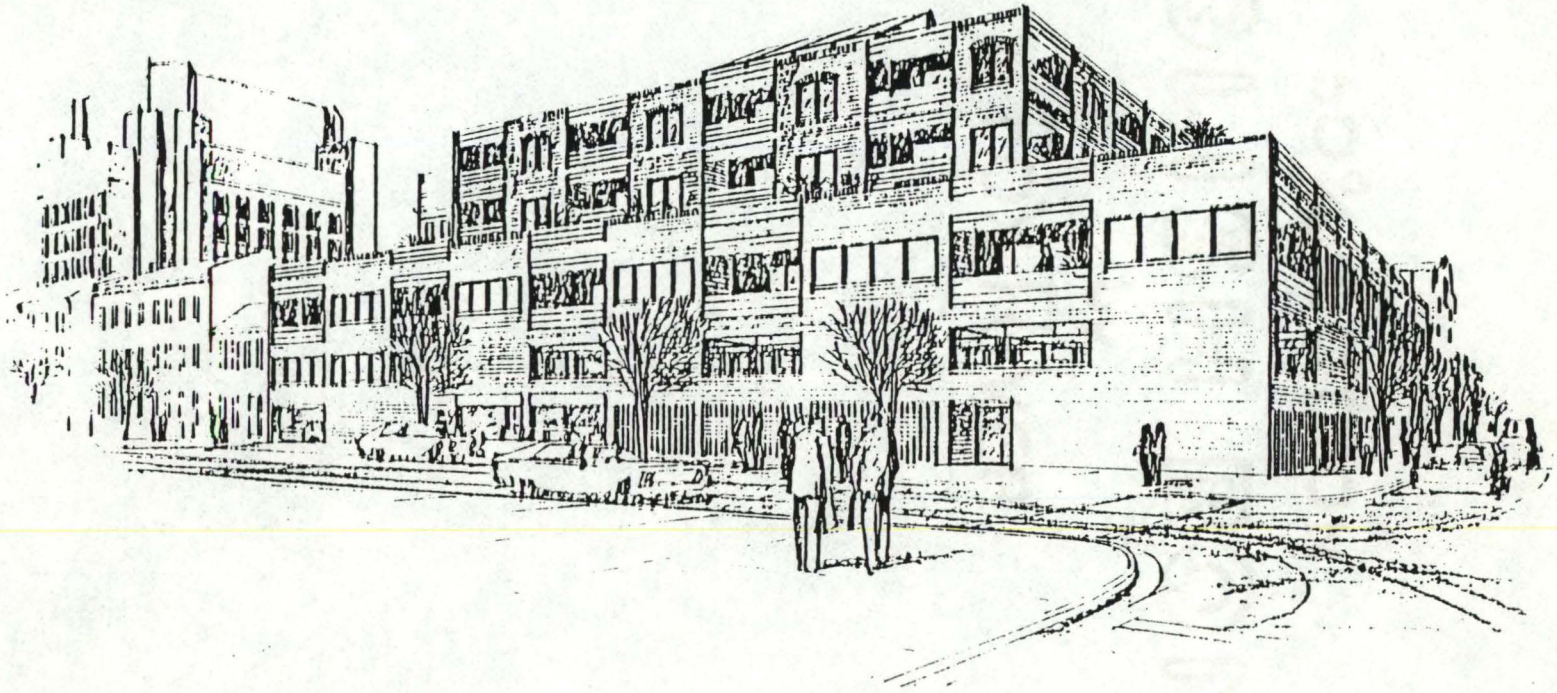


fig. 11: cooperative care center proposed for Pennsylvania Hospital- Ewing Cole Cherry Parsky, Architects

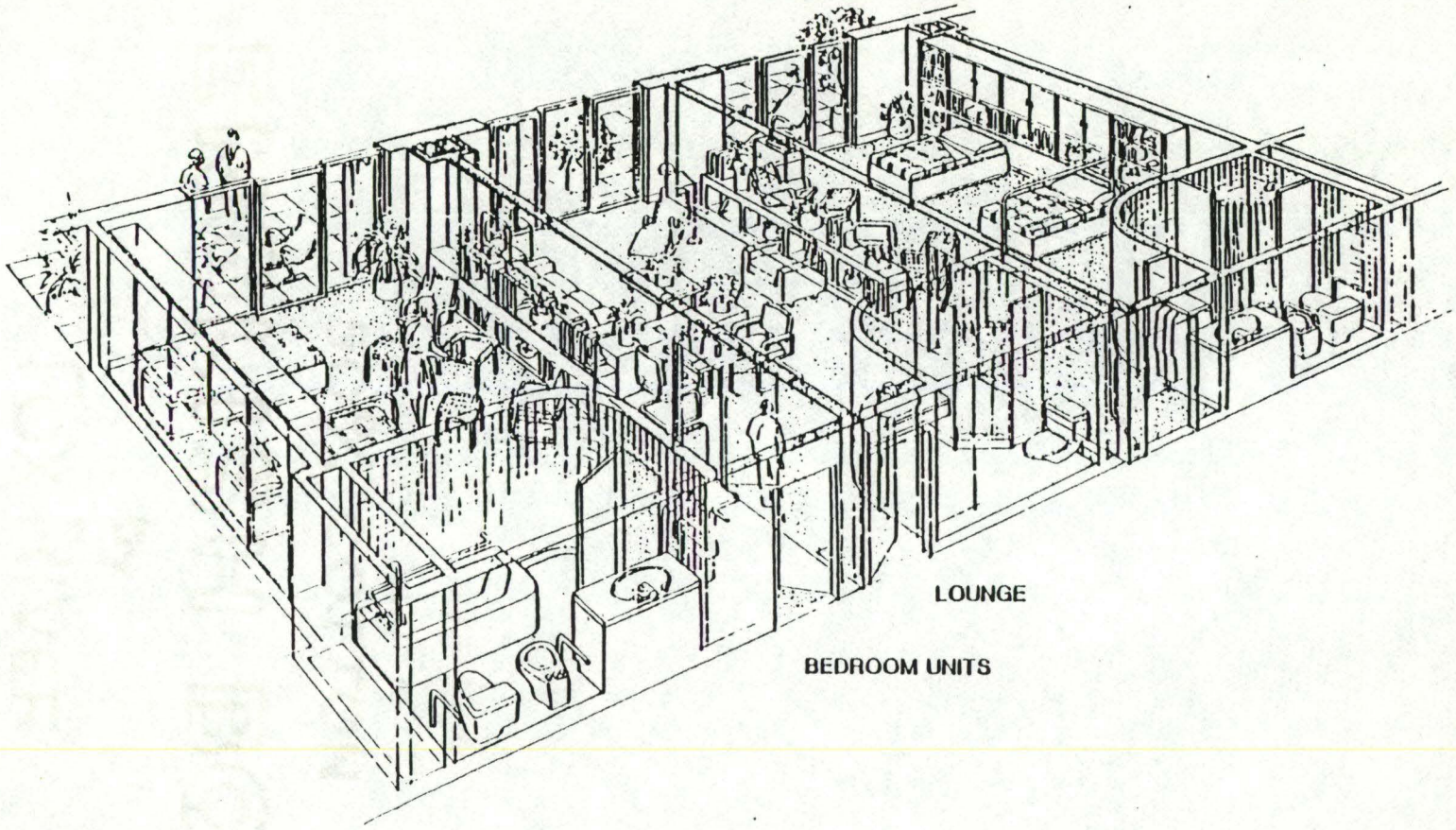
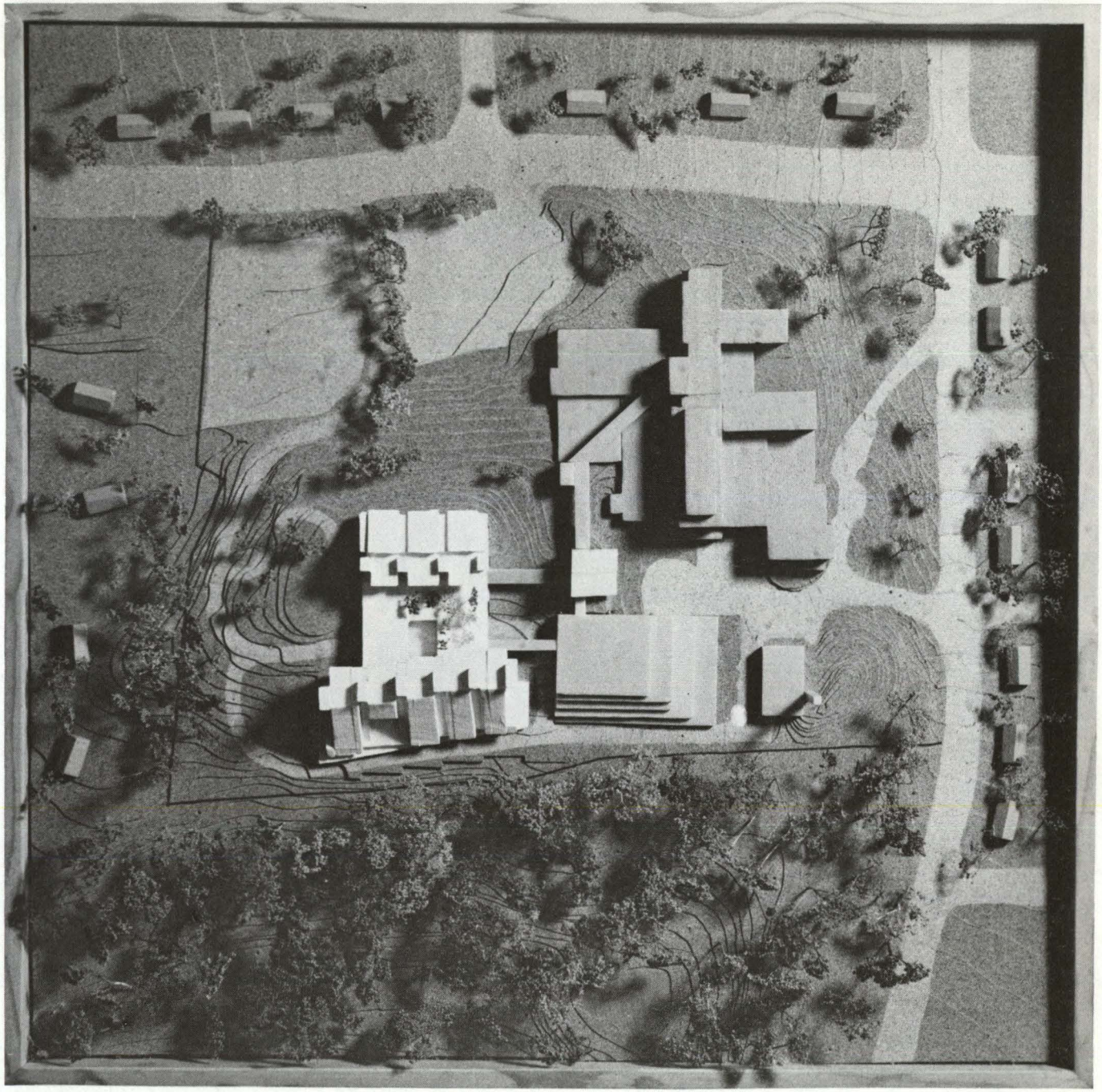


fig. 12: guest accommodations of co-op care center proposed for Pennsylvania Hospital

SETTING



Lawrence Memorial Hospital is a 250 bed community hospital in the town of Medford, Massachusetts. Within ten miles of central Boston, it is easily accessible from interstate 93. Nearby is Tufts University, whose medical school uses Lawrence Memorial as a teaching facility. The proposed New England Eye Center will be in a position to contribute to this arrangement as an educational facility.

The hospital is situated on the highest land in Medford and is characterized by rocky terrain with bedrock near the surface. This leads one to choose to build a new facility above grade as much as possible to avoid costly blasting. The sites most outstanding feature is its relationship to the adjoining Middlesex Fells, an expansive tract of woodlands that was landscaped by the great landscape architect, Frederick Law Olmstead. While the topography of the site makes designing and constructing a building quite challenging, it is a picturesque setting for the proposed facility.

fig. 13: Lawrence Memorial Hospital

Location

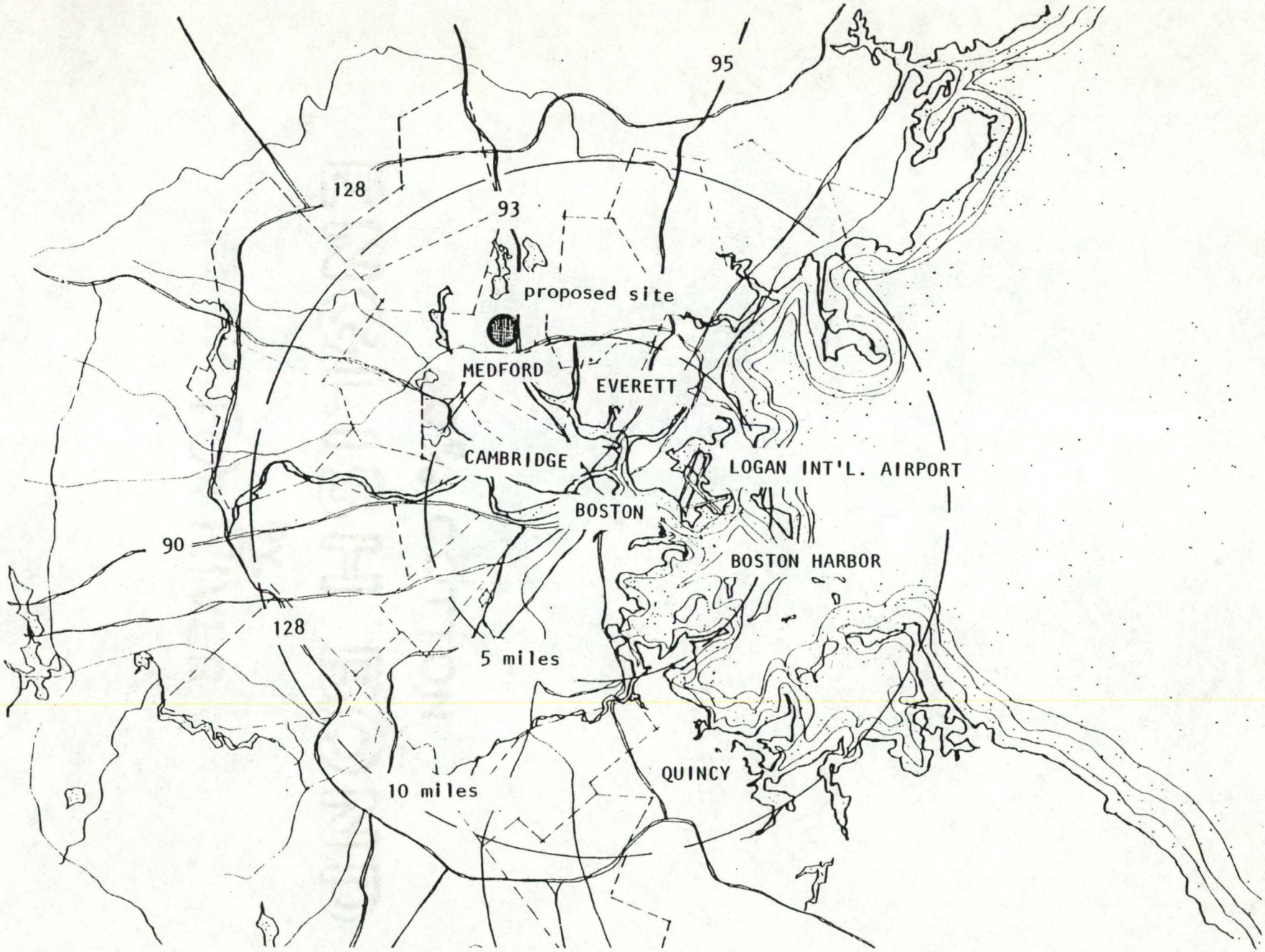


fig. 14: regional location of proposed site

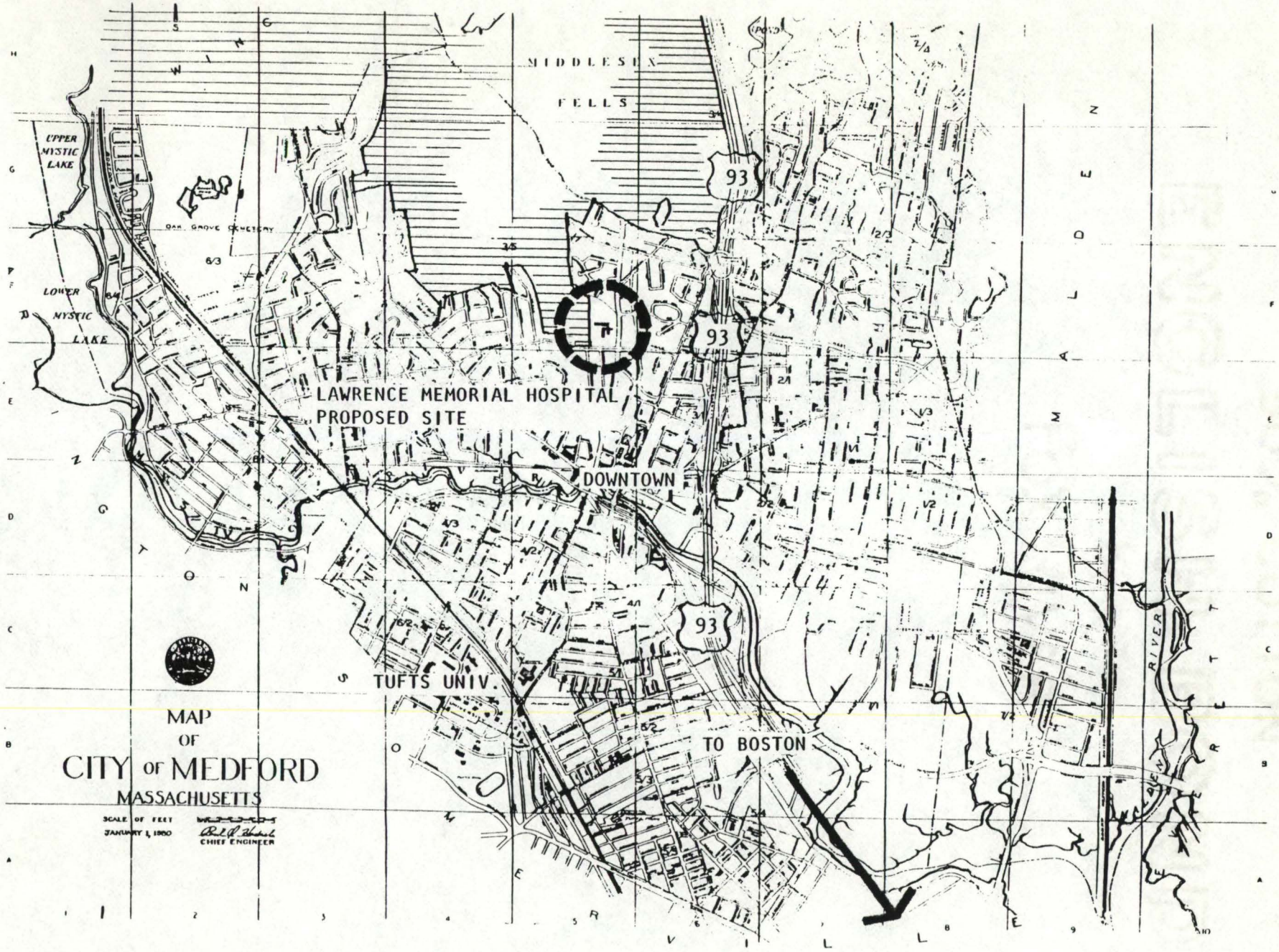
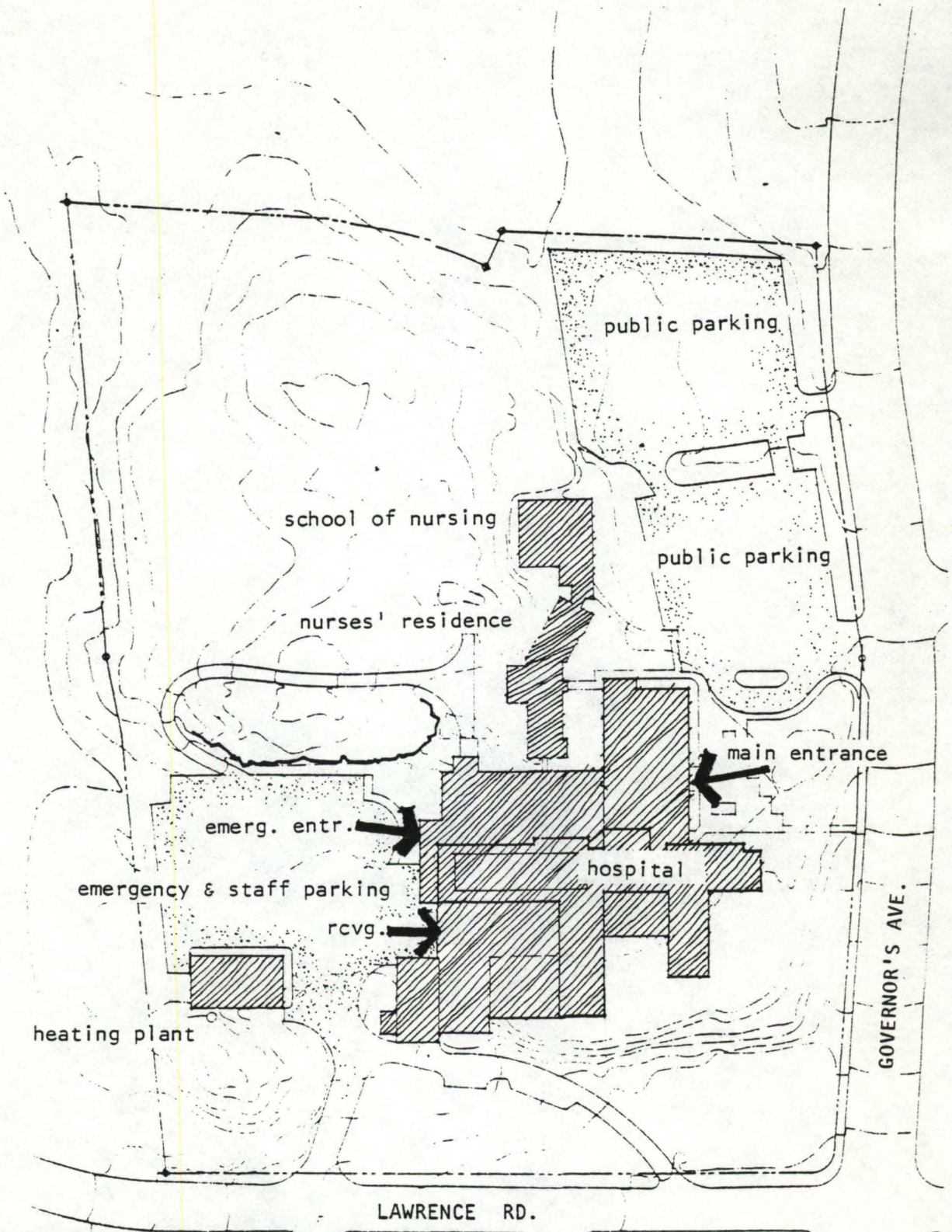


fig. 15: proposed site and town of Medford

Site

fig. 16: Inventory of existing facilities: LMH



Inventory of Existing Facilities:

Lawrence Memorial Hospital

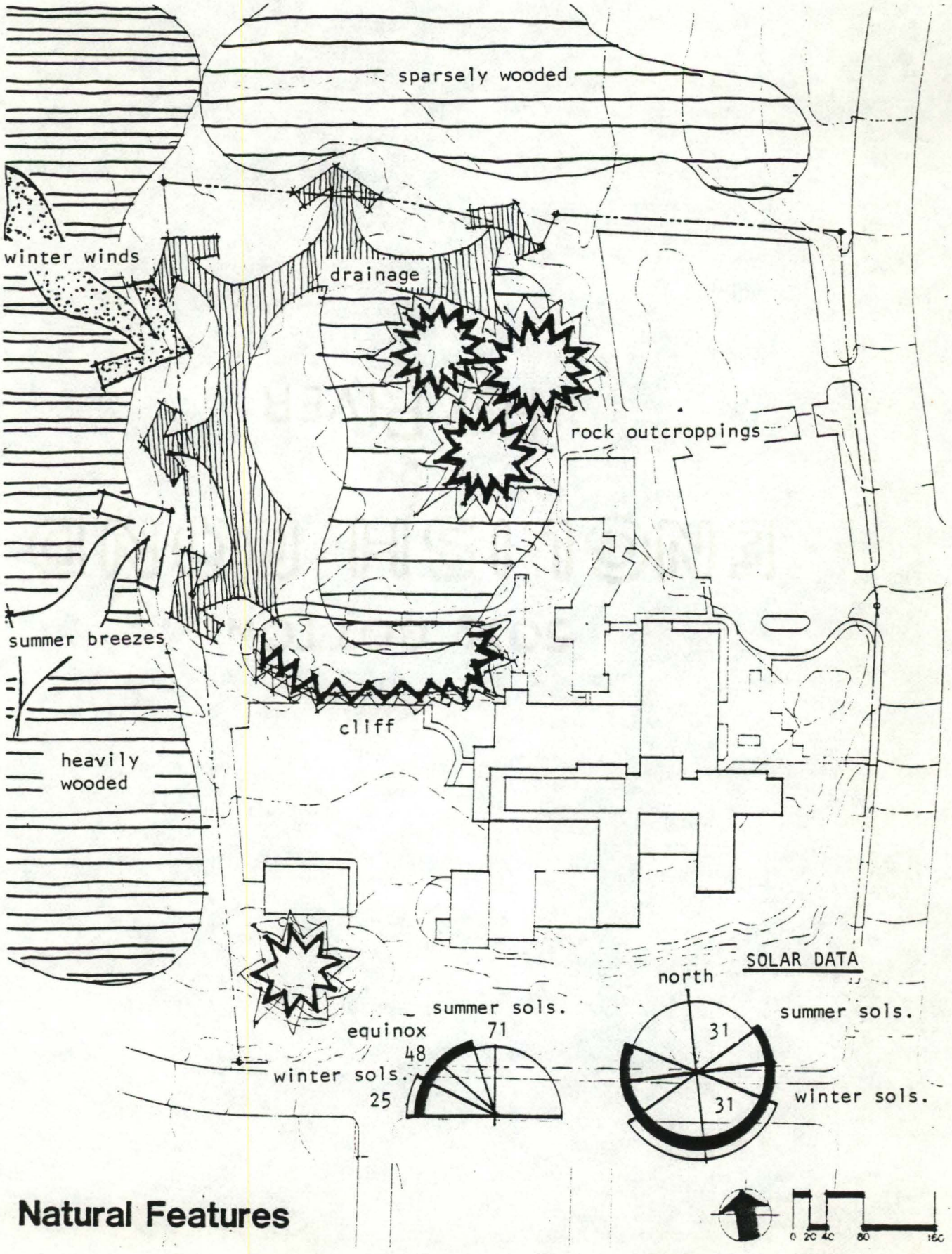


fig. 17: natural features

Natural Features

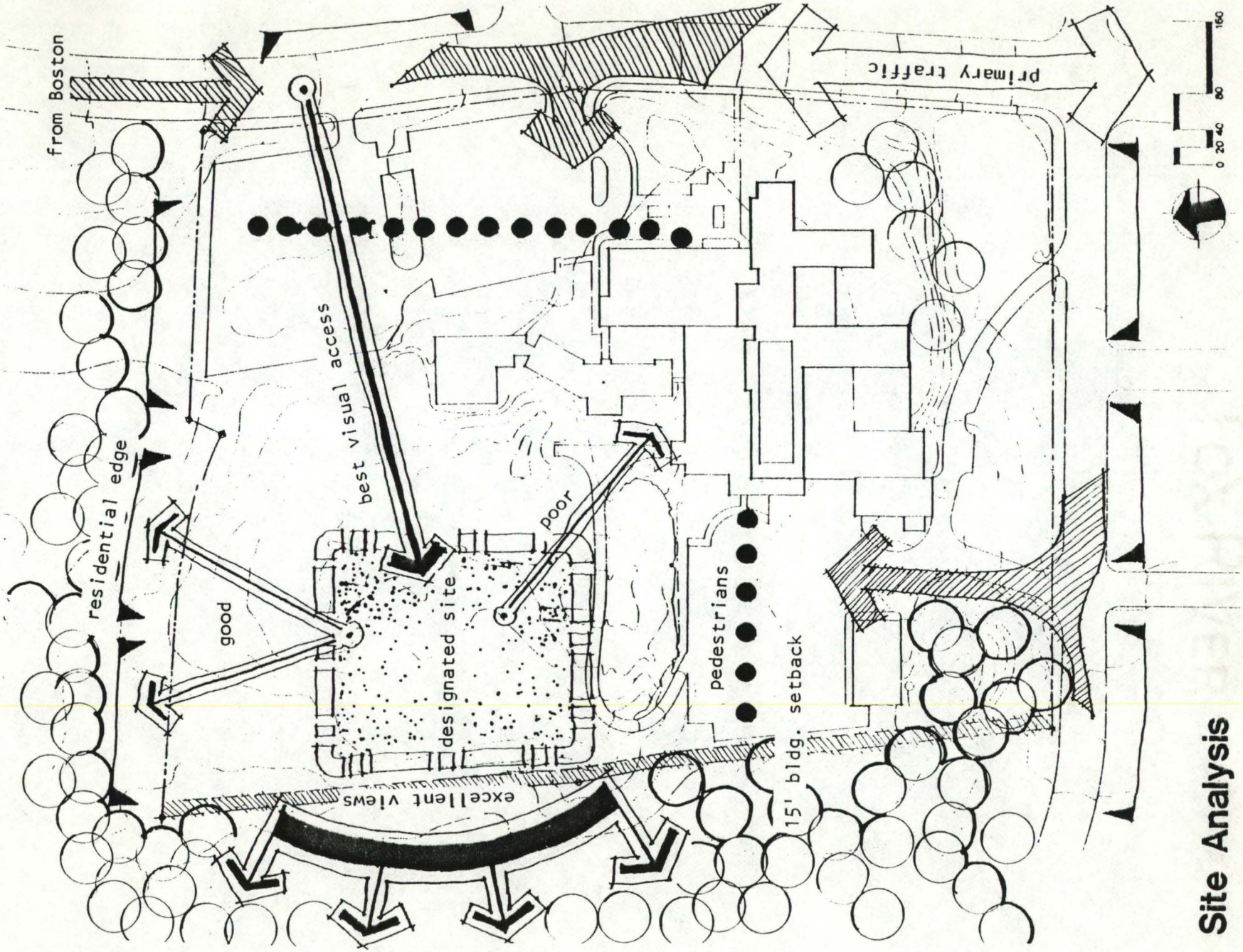
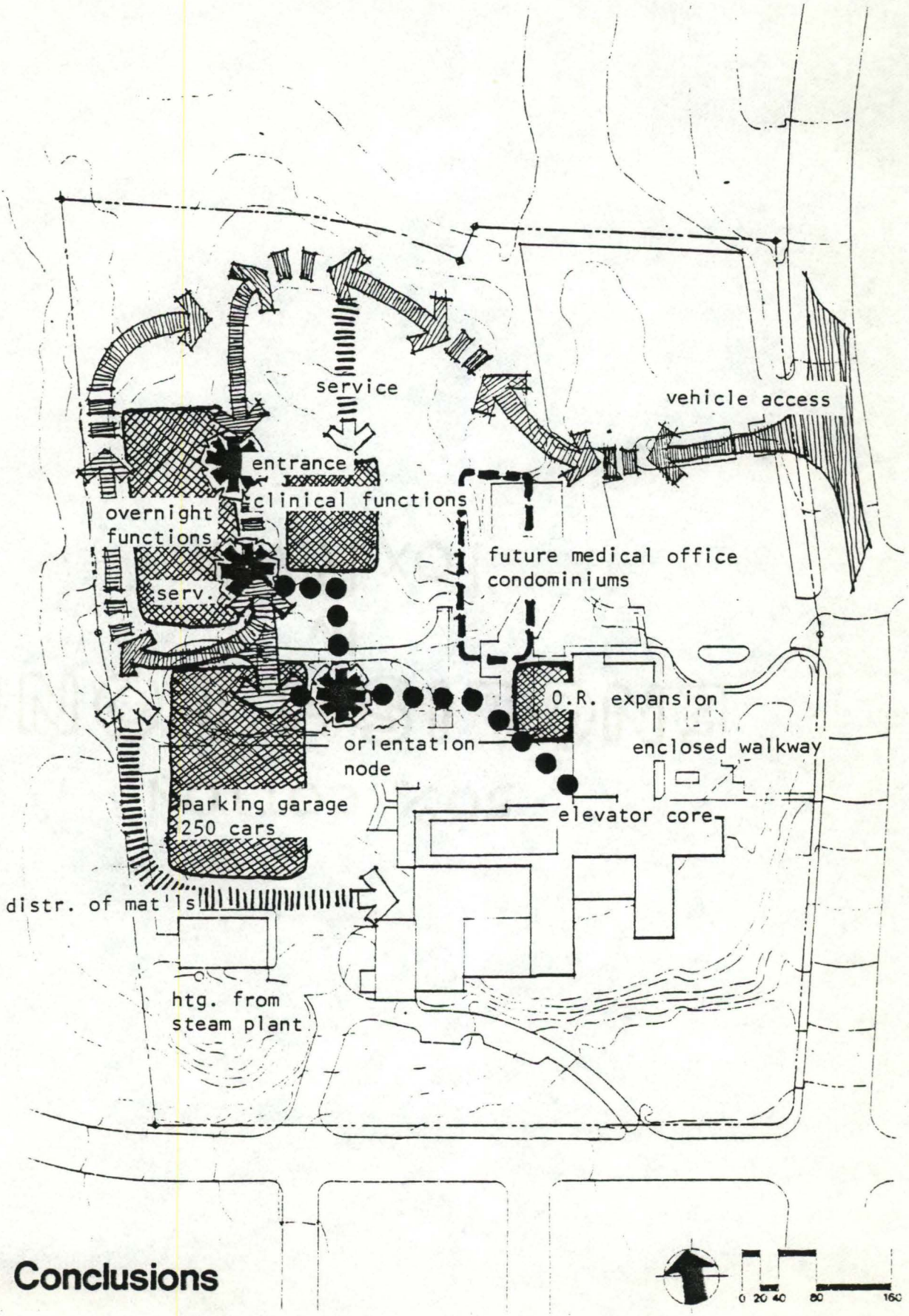


fig. 18: site analysis

fig. 19: site conclusions



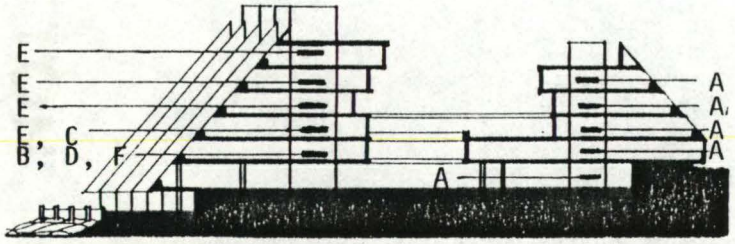
Site Conclusions

Size

The architectural program consists of two basic components:

The Clinical Functions (A)
All the Ophthalmic diagnostic and treatment activities, with the exception of surgery

The Cooperative Care Functions (B,C,D,E,F)
Those activities for clients and companions which complement the Clinical Functions



SUMMARY OF BUILDING AREAS

A. CLINICAL PROGRAM
1) Administration
2) Diagnostic and Treatment Functions
3) Support Functions for A

B. EDUCATION PROGRAM
1) Communications Center
2) Learning Center
3) Low Vision Center
4) Library
5) Auditorium

C. THERAPEUTIC PROGRAM
1) Observation Beds
2) Therapy Center
3) Passive Recreation

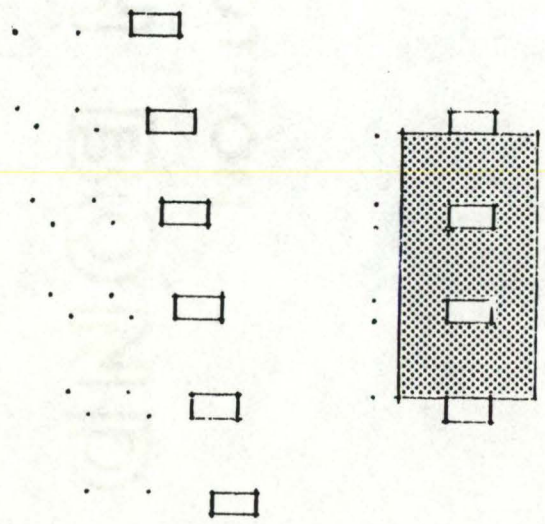
D. DIET PROGRAM
1) Guest Dining
2) Staff Dining
3) Meal Assembly

E. Guest Rooms
1) Hotel Rooms
2) Nurse Available Rooms
3) Independent Cooperative Care Rooms
4) VIP Guest Rooms

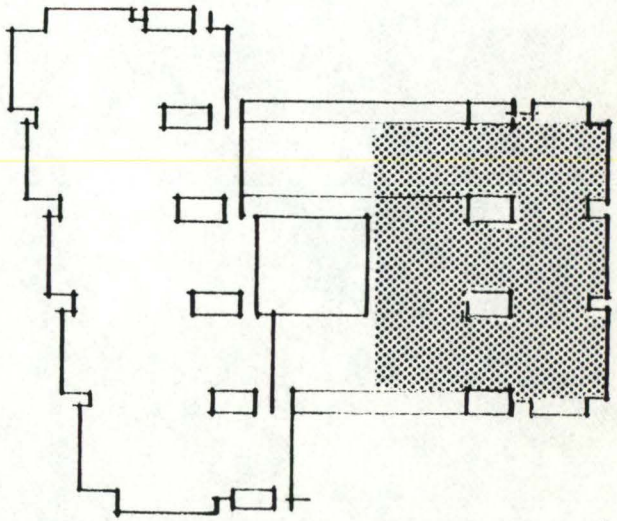
F. ANCILLARY AND SUPPORT FUNCTIONS FOR B, C, D, E
1) Storage
2) Housekeeping
3) Staff Lockers & Lounge
4) Security
5) Maintenance
6) Mechanical & HVAC

GROSS BLDG. AREA: A + B + C + D + E + F = 110,678 square feet

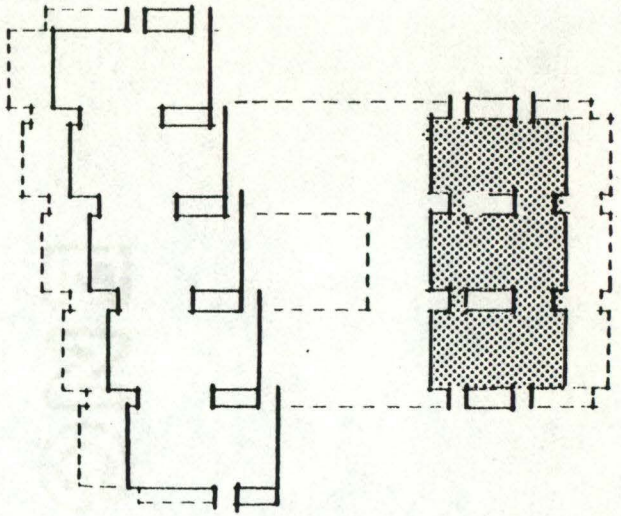
CLINICAL PROGRAM LOCATIONS



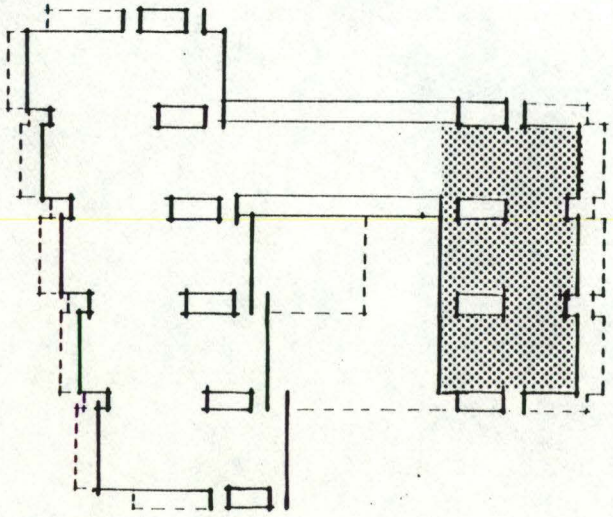
basement level: Laser Surg., Psycho-Physics Support



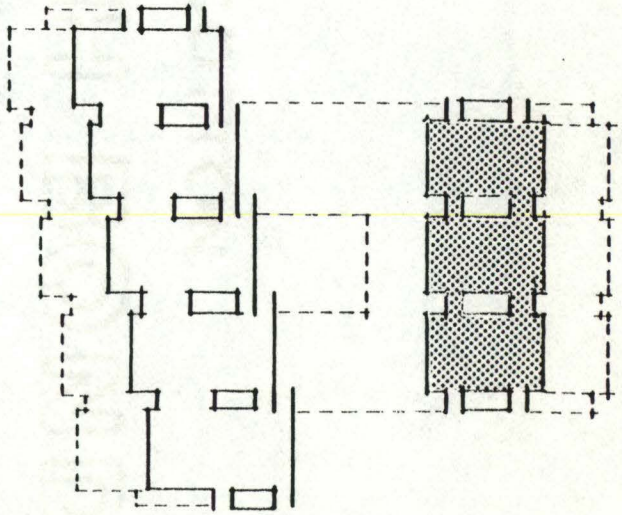
1st flr.: Diagnostic & Treatment, Photo Dept., Staff Support



4th flr.: Executive Offices



2nd flr.: Business Offices



5th flr.: Executive Offices

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Administration	Executive Offices:		
	Surgeons' Offices	private offices for associates; space for sitting and small conference table or coffee table. 10 @ 300 SF ea.	3,000
	Secretarial Areas	work areas for 8 secretaries; area for typing, file cabinets, stationary storage, copy machine, etc.	800
	Library	space for sitting, reading table, shelves for books and magazines	180
	Reception Area	space for receptionist/operator, area for comfortable seating while waiting for appointments	220
	Administrator's Office	space for desk and chairs, conference table to seat 8	220
	Storage	shelving and storage system for stationary and related supplies	60
	Toilets	include space for showers and dressing in each	240
	Typing Pool	space for 4 typists, copy machine, file cabinets	600
	Medical Records:		
	Supervisor Office	situated to control computer room; space for CRT; desk and related office furniture; seating for 1 conferee	120
	Clerical Work Area	space for 4 clerks, CRTs; work counters	180
	Records Holding Area	space to hold active files for 3 years; file storage system for medical files	1,300

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Administration (continued)	Equipment Storage	storage for equipment, stationary and related supplies	60
	Dictation Area	sound isolated space for doctor charting; provide area for table and chairs	50
	Data Processing:		
	Supervisor Office	situated to control computer room; space for CRT; desk and related office furniture; seating for 1 conferee	120
	Processing Equipment	space for main frame computer equipment; special requirements for climate control and ventilation	300
	Data Entry Terminals	work stations for computer operators; space for 6 terminals	350
	Storage	For computer, stationary, software, etc.	60
	Accounting Dept.:		
	Comptroller Office	space for desk, CRT, related office furniture; seating for small group conference	150
	Supervisor Office	space for desk, filing cabinets, seating for 2 conferees	120
	Posting Areas	space for 2 clerks to post ledger entries; work counter, CRTs	200
	Storage	provide adequate space for storage of stationary, etc. needed for Accounting Dept.	60
	Records Store	provide adequate space and appropriate filing system for holding active financial records; include area for Plate Room	220

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Administration (continued)	Billing Dept.:		
	Supervisor Office	space for supervisor, desk and related office furniture; seating for 2-3 conferees	120
	Billing Secretary Offices	space for 3 secretaries; work area with appropriate furniture; seating for 2 conferees	330
	Records Storage	space for billing records; appropriate filing system	80
	Insurance Dept.:		
	Supervisor Office	space for supervisor; desk and related office furniture; room for 2-3 conferees	120
	Insurance Consultation Room	locate near admitting and appointments scheduling area	120
	Insurance Secretary Office	provide privacy and acoustical isolation; space for 7 secretaries; seating for 2 conferees in each office	770
	Storage	space for storing stationary and supplies	60
	Staff Toilets:		220
		NET SQUARE FOOTAGE FOR ADMINISTRATION	10,500

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Diagnostic and Treatment	Admitting:		
	Reception Desk	to receive people arriving; relate to communications center	100
	Waiting Area	space for short term waiting	420
	Admitting Consulting Offices	space for 2 consultation officers; sound isolation and visual privacy for 2 consultees in each office	240
	Insurance Consulting Office	space for receiving insurance information; seating for consultant and 2 conferees; sound and visual privacy	120
	Clinical Director Office	space for desk, shelves and files; seating for 4 conferees	140
	Examining:		
	Nurse Offices	space for desk, supply cabinets, exam table 10 @ 120 SF ea.	1,200
	Dr Exam Rooms	space for exam table, sink and counter; charting desk; slit lamp 10 @ 140 SF ea.	1,400
	Client Toilets		220
	Staff Conference Room	locate away from patient traffic; space for 8 conferees	180
	Ultrasound Testing Room	space for performing ultrasonography; procedure table and appropriate electronic equipment	140

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Diagnostic and Treatment (continued)	Laser Treatment Room	space for laser equipment; procedure table, carts, etc.	180
	Krypton Laser Room	space for laser equipment; procedure table, carts, etc.	180
	Photography Dept.:		
	Supervisor Office	space for desk and related office furniture; seating for 2-4 conferees	120
	Fluorescent Angiography Rooms	sink and counter; medicine cabinet; table for i.v. induction 3 @ 110 SF ea.	330
	Photographer Work Stations	work counters with built-in light tables for slide viewing; storage cabinets for film storage, etc.; provide secure storage for cameras and related equipment for each photographer	400
	Wide Angle Camera Room	space for photographer and 2 others; procedure chair and camera mounting equipment	100
	Macular Disk Camera Room	space for photographer and 2 others; procedure chair and camera mounting equipment	100
	Monochromatic Camera Room	space for photographer and 2 others; procedure chair and camera mounting equipment	100
	Anterior Segment Camera Room	space for photographer and 2 others; procedure chair and camera mounting equipment	100
	Darkrooms	space for handling film and processing; provide proper ventilation chemical storage racks; work counter and sink for developing film	240
	Drying Room	space for handling developed film; racks for drying film	48

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Diagnostic and Treatment (continued)	Photography Laboratory	work counter; space for 2 slide mounting machines; long processing sink; storage cabinets	200
	Storage	secure storage for chemicals and related photo supplies	60
	Psycho-physics Dept.:		
	Supervisor Office	space for desk and related office furniture; seating for 2 conferees	120
	Waiting Area	comfortable seating for short term waiting between procedures	240
	Staff Work Room	work counter for 6; cabinets for equipment storage and table for conference	240
	Exam Rooms	3 @ 110 SF ea.	330
	Visual Acuity Testing Rooms	space for reading eye charts and related testing procedures	160
	Automated Visual Acuity Testing	space for equipment; clinician and chair for companion; procedure chair	120
	Two Point Fluoro-photometry Lab	large space for procedures with experimental equipment; space for clinician and seating for companion	480
	Dark Adaptation Rooms	space for procedure chair and clinician; space for companion seating 2 @ 160 SF ea.	320
	Psycho-physics Studies Lab	space for assembling and testing equipment; work counter and storage for tools and parts	300

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Diagnostic and Treatment (continued)	Consulting Dr Office	space for desk and related furniture; seating for 2 conferees	120
	Storage	space for storage of stationary and related materials	80
	Toilets	2 @ 60 SF ea.	120
	Teaching Services:		
	Surgical Fellows Work Area	space for studying and related work; include counters with built-in slide viewing illuminators; comfortable chairs for lounge area	480
	Secretary Office	space for secretarial furniture, filing cabinets, etc.; space for seating for 3-4 conferees	200
	Teaching Slide Collection	storage system for slides; work space for curator; include slide viewing table	120
	Conference Room	conference table and seating for 8-12	280
	Consulting Dr. Office	offices for intermittent use by visiting physicians	120
	Graphic Arts Dept.:		
	Medical Artist's Office	space for desk and related office furniture; drawing table, drawing flat files and art supplies	140
	Graphic Arts Lab	space for 3 artists; drawing tables, flat files for drawings and storage for supplies	260
	Darkroom	space for handling film, etc.; light table for viewing slides and film	100
	Storage	storage for paper; artists equipment and related supplies	80
		NET SQUARE FOOTAGE FOR DIAGNOSTIC & TREATMENT PROGRAM	10,800

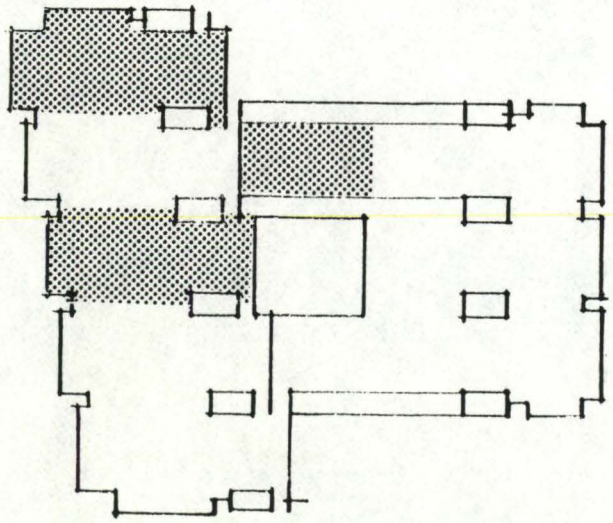
PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
A. Clinical Program/ Support Functions	Housekeeping:	preparation area for housekeeping staff; cleaning equipment and supplies storage	160
	Materials Management:		
	Loading Dock	adjacent to storage for receiving deliveries of bulk supplies	110
	Purchasing Agent Office	provide space for desk, files, CRT and related office furniture; seating for 2 conferees	110
	Central Stores	space for receiving and inventorying supplies; provide appropriate storage system for medical supplies and general office materials	320
	Bulk Stores	space for storing unused equipment and inactive files, etc; supplies holding before unpacking	600
	Staff Lockers:	locker space, dressing area; showers and toilets	520
	Staff Lounge:	space with comfortable seating; sink and coffee-making facilities for breaks and retreat	650
	HVAC & Mechanical:	spaces for equipment needed to provide utilities and to house air handlers and other heating and cooling equipment	1,800
		NET SQUARE FOOTAGE FOR SUPPORT FUNCTIONS	4,450

SUMMARY:

TOTAL NET SQUARE FOOTAGE FOR A = 25,750

GROSS SQUARE FOOTAGE = net sq. ft. + circulation + walls, etc.
= 25,750 X 1.45 = 37,338

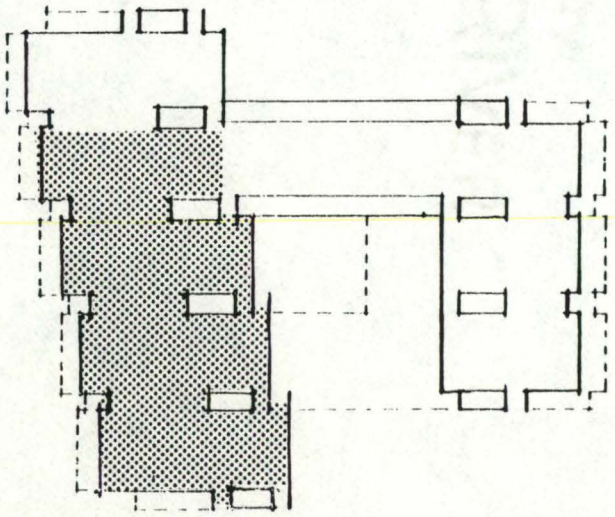
EDUCATION PROGRAM



1st flr.: Education Center

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
B. Education Program	Communications Center		
	Cooperative Care Manager's Office	private office space for desk and related furniture; seating for 2 conferees	120
	Orientation Station	situated to control entry; provide counter for receptionist, clerk, activities coordinator; storage system for stationary, forms; filing cabinets, etc.	375
	Learning Center		
	Occupational Therapist Office	space for desk and related office furniture; seating for 2 conferees	140
	Nutrition Consultant Office	space for desk and related office furniture; seating for 2 conferees	140
	Nurse Educator Office	space for desk and related office furniture	120
	Audio-visual Alcoves	12 cubicles for viewing video films and listening to cassette tapes, etc; include storage closets for equipment and supplies	960
	Toilets	toilet facilities for clients and guests	260
	Low Vision Center		
	Director Office	desk and related office furniture; seating for 4 conferees	220
	Coordinator Office	control of entry to department; counter for receiving clients; space for typing; storage for stationary and records filing	120

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
B. Education Program (continued)	Consulting Doctor Office	desk and related office furniture; seating for 2 conferees	140
	Conference Room	conference table and seating for 6-8 conferees	200
	Exam Rooms	adequate space for doctor, client, and companion; procedure chair and equipment 4 @ 110 SF ea.	440
	Records Storage	holding area for low vision records; work counter; space for records files	200
	Visual Acuity/ Refraction Lab	area for distance chart reading	160
	Equipment Storage/ Assembly Lab	space for storing testing equipment, etc.; work counter for development of new equipment	200
	Waiting Area	seating for clients of low vision center	100
	Library	space for librarian's desk; book stacks and reading tables, chairs	1,350
	Auditorium		
	Seating Area	space for 250 seats	2,200
	Stage	space for speaker; podium, movie screen	280
	Projection Room	work counter for projectors; space for audio-visual control equipment	130
		NET SQUARE FOOTAGE FOR EDUCATION PROGRAM	7,800

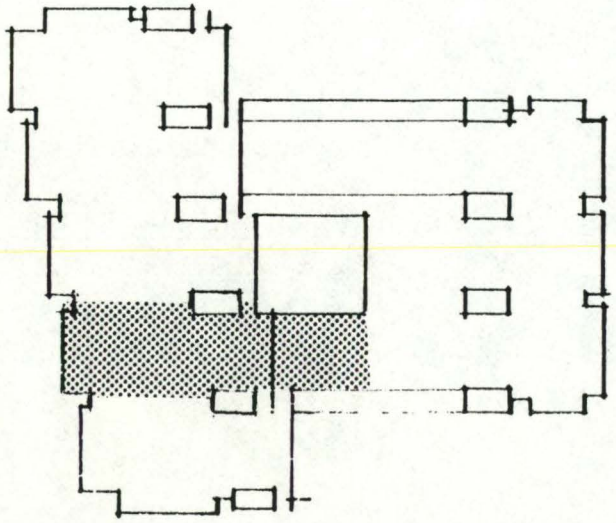


2nd flr.: Therapy Center

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
C. Therapeutic Program	Observation Beds		
	Client and Companion Rooms	suite for client and companion with bathroom and lounge for companion 4 @ 330 SF ea.	1,320
	Doctor Charting Area	space with work counter and cabinets for storage of forms and related material	110
	Nursing Supervisor Office	space for desk and related office furniture; seating for 2 conferees	140
	Clean Utility Room	space with storage system for clean supplies; work counter	110
	Soiled Utility Room	space for holding soiled linens, etc.; work counter and clinical sink	110
	Equipment Storage	controlled access space for holding equipment used for acute nursing services	120
	Staff Toilets		80
	Nurses' Station	provide work counter and storage cabinets for equipment and supplies	140
	Medical Storage & Preparation	controlled access room for storage of drugs and medical supplies; cabinets and work counter for preparation of i.v. solutions, etc.	160
	Therapy Center:		
	Waiting Area	seating area for pre-appointment waiting	900
	Nursing Coordinator Office	open office area with reception counter; storage cabinets for stationary, etc.; space for several staff members including nurses, clerk, typist	400

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
C. Therapeutic Program (continued)	Consultation Rooms	space for clients and counselor; desk for counselor; seating for 3-4 conferees 3 @ 200 SF ea.	600
	Pharmacy	space for storing and preparing drug dosages; work counter for pharmacist; counter for clients to pick up medications	200
	Records Coordinator Office	space for posting records, CRT; space for file storage system	120
	Admissions Director Office	space for desk and related office furniture; seating for 2 others for admissions interviews	140
	Exam Rooms	space for doctors and nurses to conduct exams; table, wash sink and cabinet for equipment 8 @ 100 SF ea.	800
	Storage for Equipment & Supplies	space for holding miscellaneous equipment used in therapy center	200
	Clean Utility Room	space with appropriate storage for clean supplies; work counter and sink	110
	Soiled Utility Room	space for holding soiled linens; work counter and clinical sink	110
	Toilets	male and female toilets for clients	220
	Passive Recreation Lounge	space for guests to interact; comfortable seating; tables for board games, etc; may also function as auditorium lobby	1,400
		NET SQUARE FOOTAGE FOR THERAPEUTIC PROGRAM	7,500

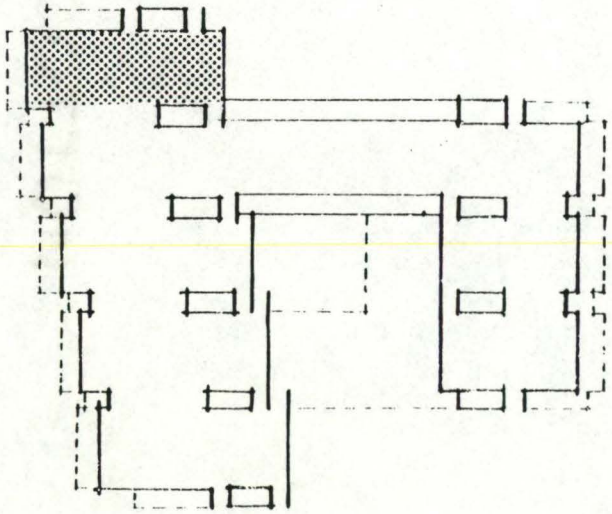
DIETARY PROGRAM



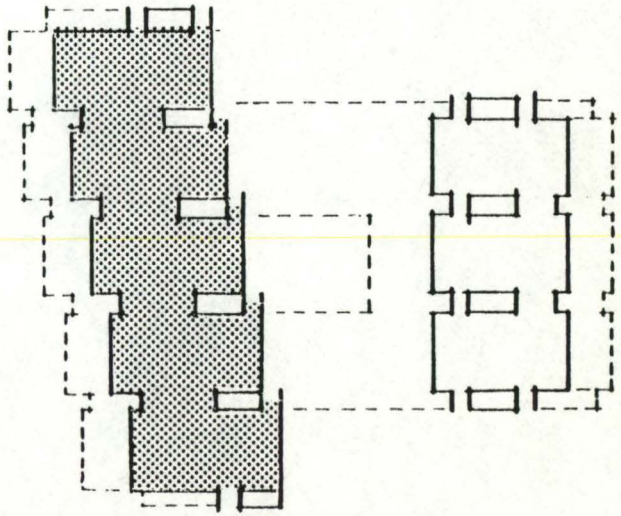
1st flr.: Guest Dining, Staff Dining, Meal Assembly

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
D. Dietary Program	Guest Dining:		
	Dining Room	space for clients and companions to dine; may include table service; area for tables and chairs	1,800
	Tray Line	cafeteria style meal pick-up	250
	Cashier/Reception	situated to control access to dining room; counter space for cashier to file paperwork related to guests' meal bills	80
	Storage	space for storing chairs, tables and related furniture, etc. for dining room	300
	Meal Assembly Area	space for receiving foods prepared in hospital dietary department; area for refrigeration and pantry storage for short term; dishwashing area and meal assembly area	1,800
	Staff Dining	separate dining room for staff with serving line and cashier's desk	1,100
	Toilets	separate toilets for guests and dietary staff	240
		NET SQUARE FOOTAGE FOR DIETARY PROGRAM	5,570

GUEST ROOMS

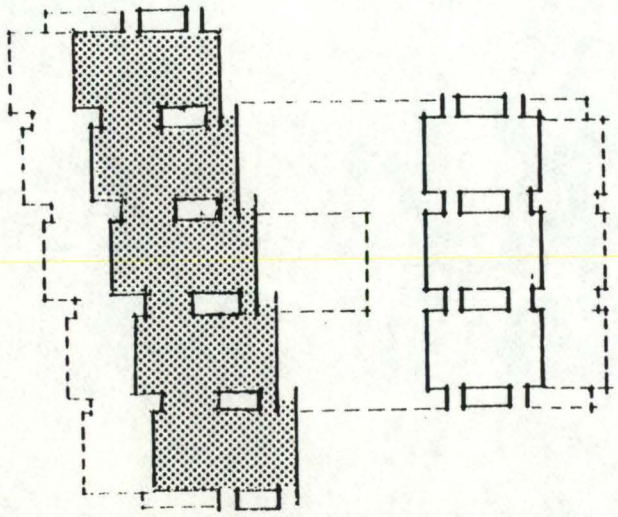


2nd flr.: Hotel Rms.

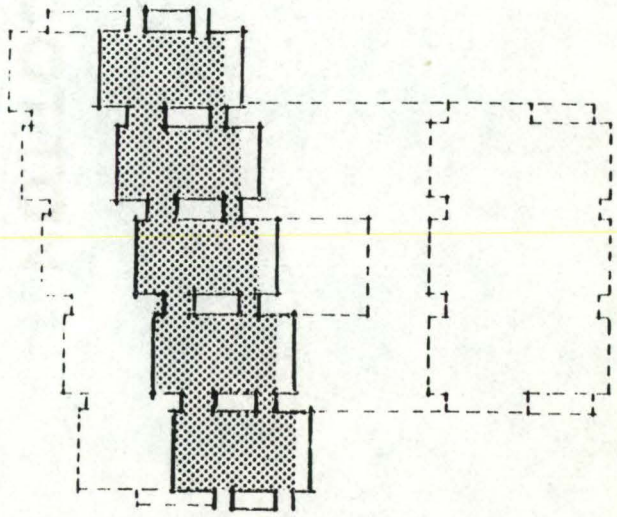


3rd flr.: Nurse Available Rms, Hotel Rms.

GUEST ROOMS



4th flr.: Independent Co-op Care Rms.

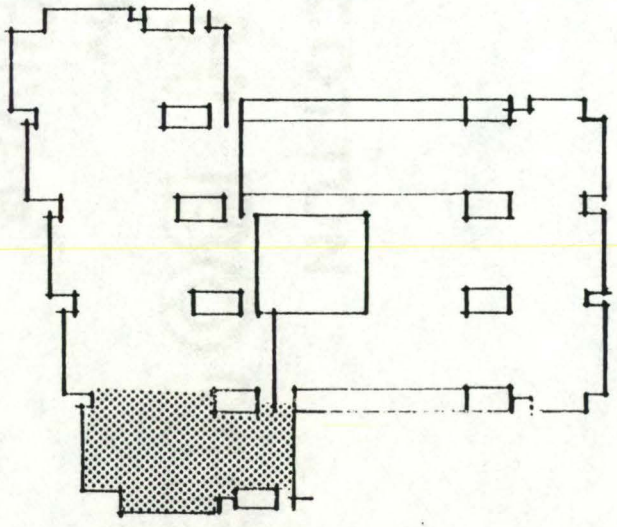


5th flr.: VIP Suites

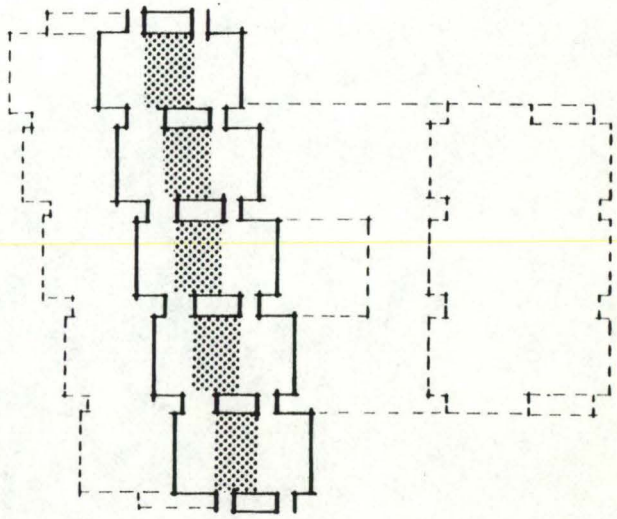
PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
E. Guest Rooms	Hotel Rooms	rooms for non-medical/surgical guests and for family members while client is in hospital	
		12 @ 325 SF ea.	3,900
	Nurse Available Rooms		
	Nurse Consulting Area	space for nurse to write and prepare medicine, etc.; counter; storage cabinets for supplies; medicine lock-up; storage for equipment	300
	Staff Toilets		80
	Elevator Lobby	adjacent to elevator for receiving meals, linens, supplies, etc. and for storing stretchers and other related equipment	280
	Housekeeping Room	space for storage of cleaning equipment; sink for cleaning mops, etc.	200
	Clean Utility Room	storage for clean supplies; work counter and sink	110
	Soiled Utility Room	space for holding soiled linens, etc.; work counter and clinical sink	110
	Medical Prep Room	secure storage for medicine; preparation of i.v. solutions, etc.; counter for work with sink	140
	Guest Rooms	bedrooms with private baths and dressing areas; separate compartment for companion sleeping that would enable nurse to enter client room without disturbing companion	
		15 suites @ 385 SF ea.	5,775
		3 rooms @ 285 SF ea.	855

PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
E. Guest Rooms	Independent Cooperative Care Rooms		
	Nourishment and Housekeeping Alcoves	facilities for self-service of linens and housekeeping supplies; counter, facilities for light snack preparation, small refrigerator, etc.; include space for depositing soiled linens	
		5 @ 280 SF ea.	1.400
	Guest Rooms	private guest rooms with bath and dressing area; sleeping room for 2; comfortable sitting area	
		15 @ 375 SF ea.	5,625
		6 @ 300 SF ea.	1,800
	VIP Guest Suites		
	Guest Rooms	suite with private bath, dressing area, small kitchenette with table for dining; area for comfortable sitting	
		4 @ 680 SF ea.	2,720
		2 @ 350 SF ea.	700
	Housekeeping	space for storage of housekeeping equipment; clean and soiled linens; sink for clean-up	520
	Attendant Rooms	sleeping rooms for VIP attendants	
		2 @ 280 SF ea.	560
	On-call Room	sleeping room with bath for private duty nurse	275
		NET SQUARE FOOTAGE FOR GUEST ROOMS	25,350

SUPPORT FUNCTIONS FOR B,C,D,E



1st flr.: Support Functions



penthouse: HVAC equip., Storage

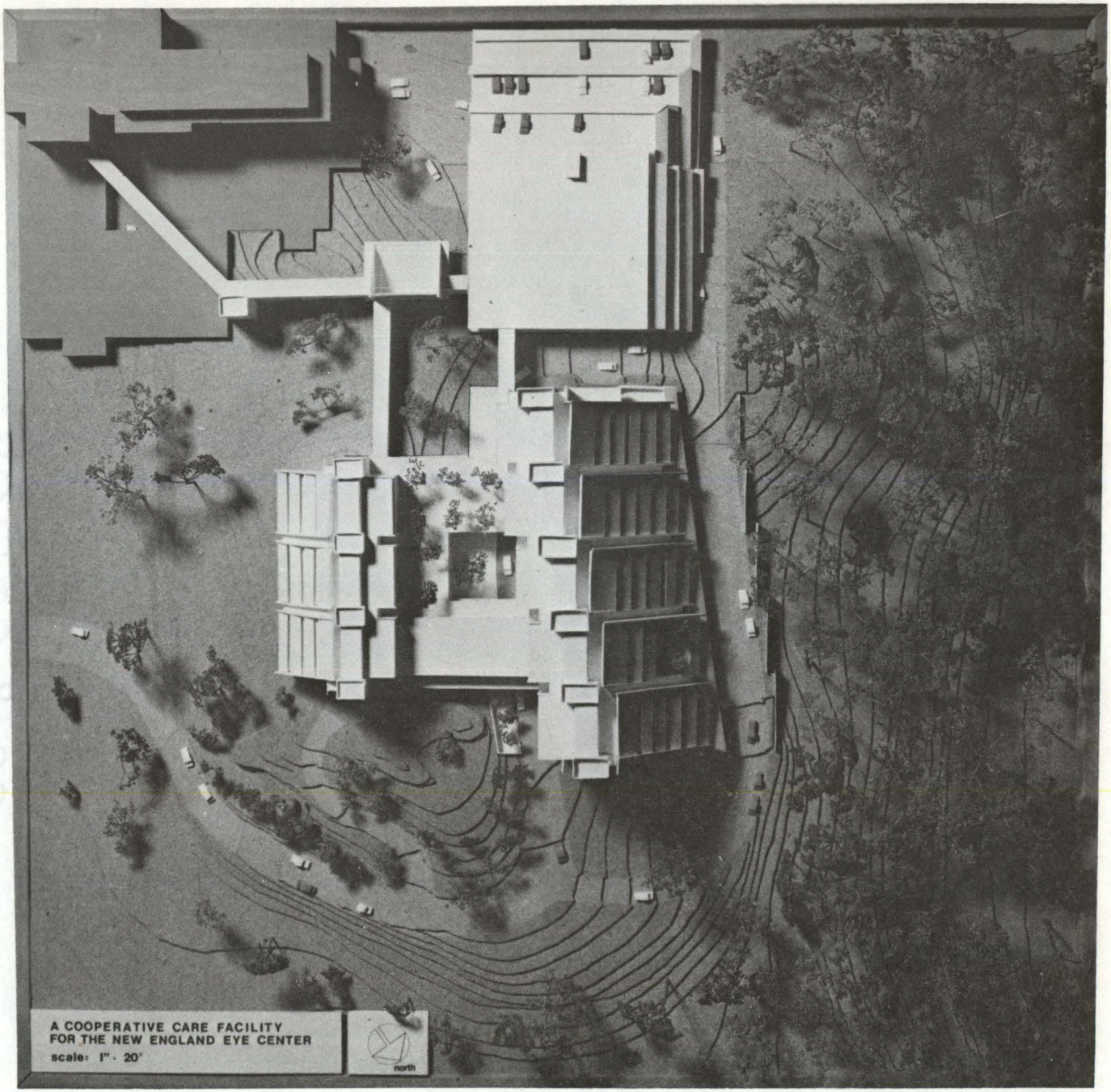
PROGRAM FUNCTION	SPACE	DESCRIPTION	SQ. FT.
F. Support Functions for B, C, D, E	Public Lobby	space for lounge chairs for guests	900
	Storage	space for storing unused equipment and materials	730
	Housekeeping	area for central storage of housekeeping equipment and materials	
	Bldg. Manager Office	space for desk and related office furniture; seating for 1 conferee; storage for records	180
	Staff Lockers & Lounge	male and female locker rooms with lockers; dressing areas; showers and toilet facilities; lounge for taking breaks, eating lunch and conducting staff conferences	1,088
	Security	booth for security monitoring equipment and attendant; situate at strategic location to control access to building at non-public entry	100
	Maintenance	room for storing maintenance equipment and materials; area for work bench and for tools	288
	Mechanical & HVAC	spaces for mechanical equipment; air handling units and related equipment needed to provide water and other utilities and maintain climate control of entire building	2,800
		NET SQUARE FOOTAGE FOR SUPPORT FUNCTIONS	6,360

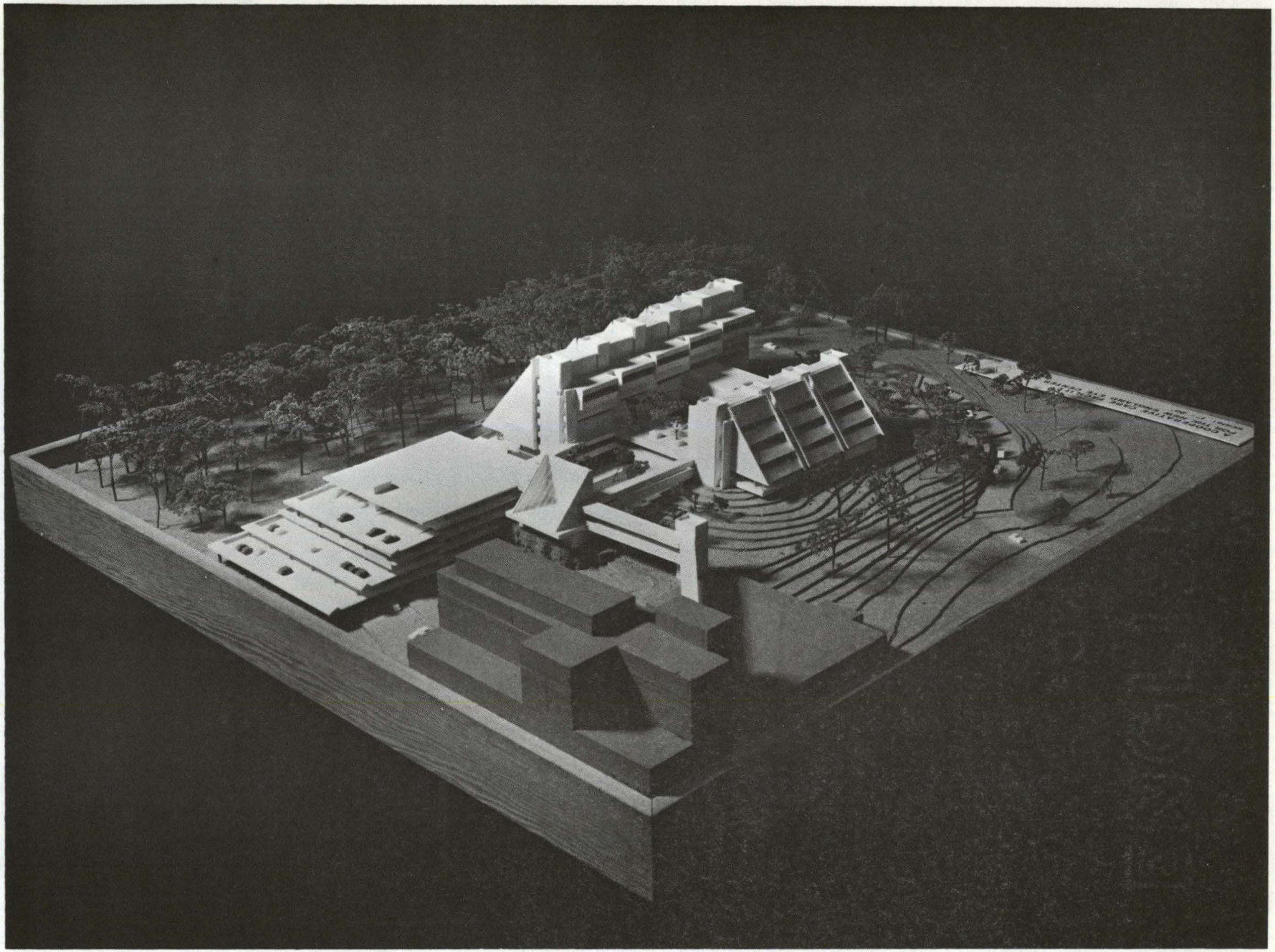
SUMMARY:

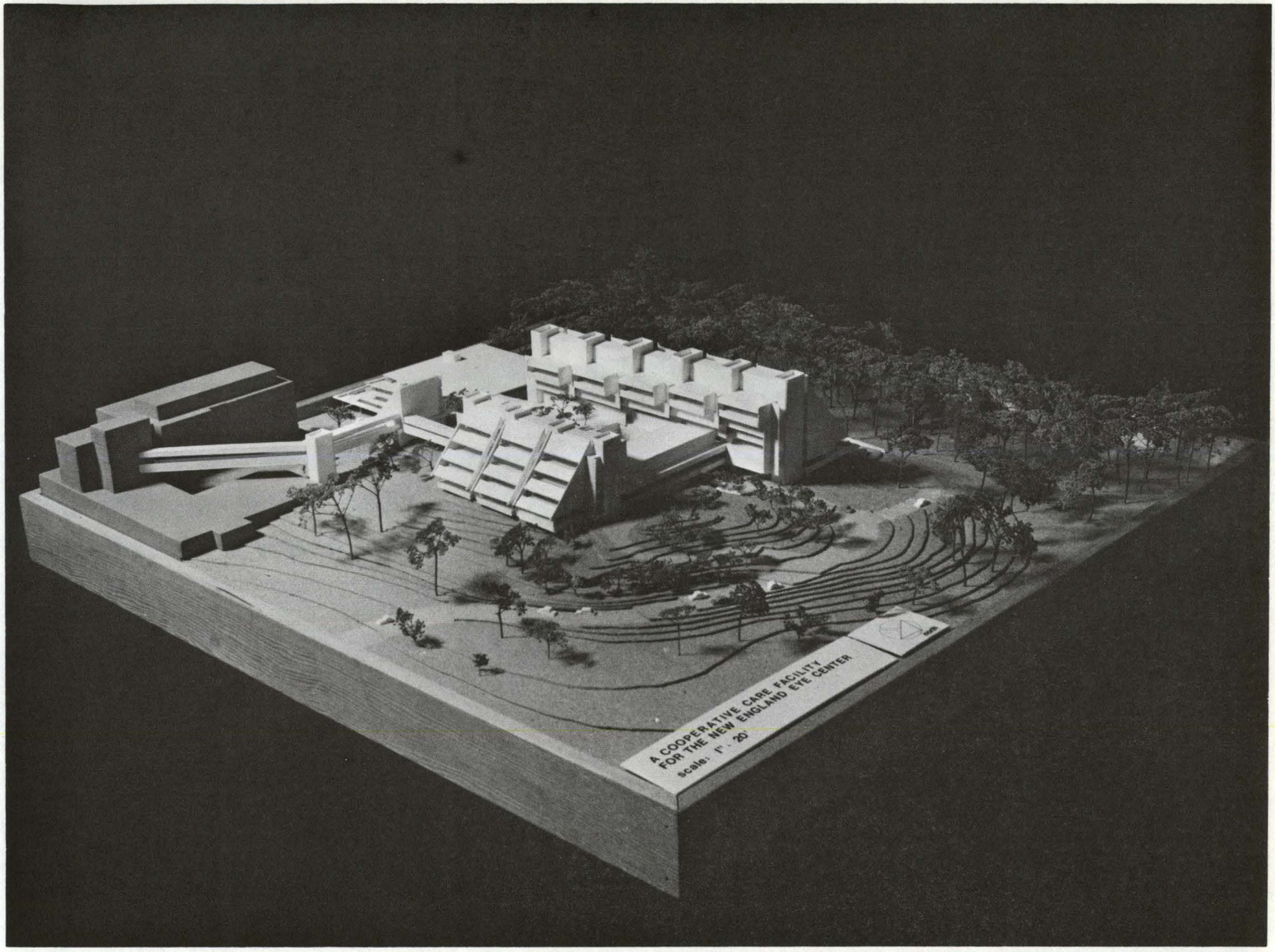
TOTAL NET SQUARE FOOTAGE FOR B, C, D, E, F = 50,580

GROSS SQUARE FOOTAGE = net sq. ft. + circultion + walls, etc.
= 50,580 X 1.45 = 73,340

THE BUILDING COMPLEX


A COOPERATIVE CARE FACILITY
FOR THE NEW ENGLAND EYE CENTER
scale: 1" = 20'
north

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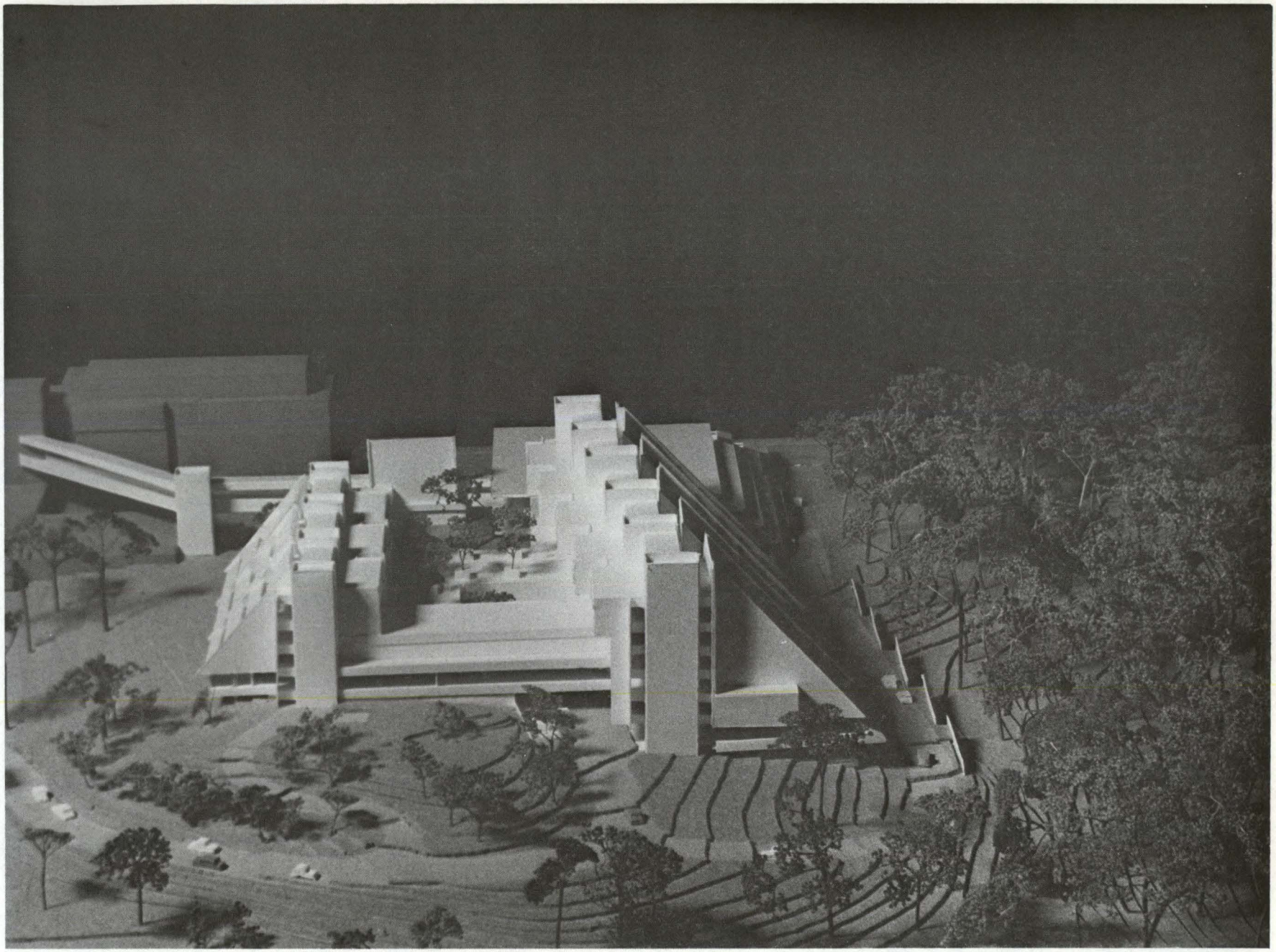

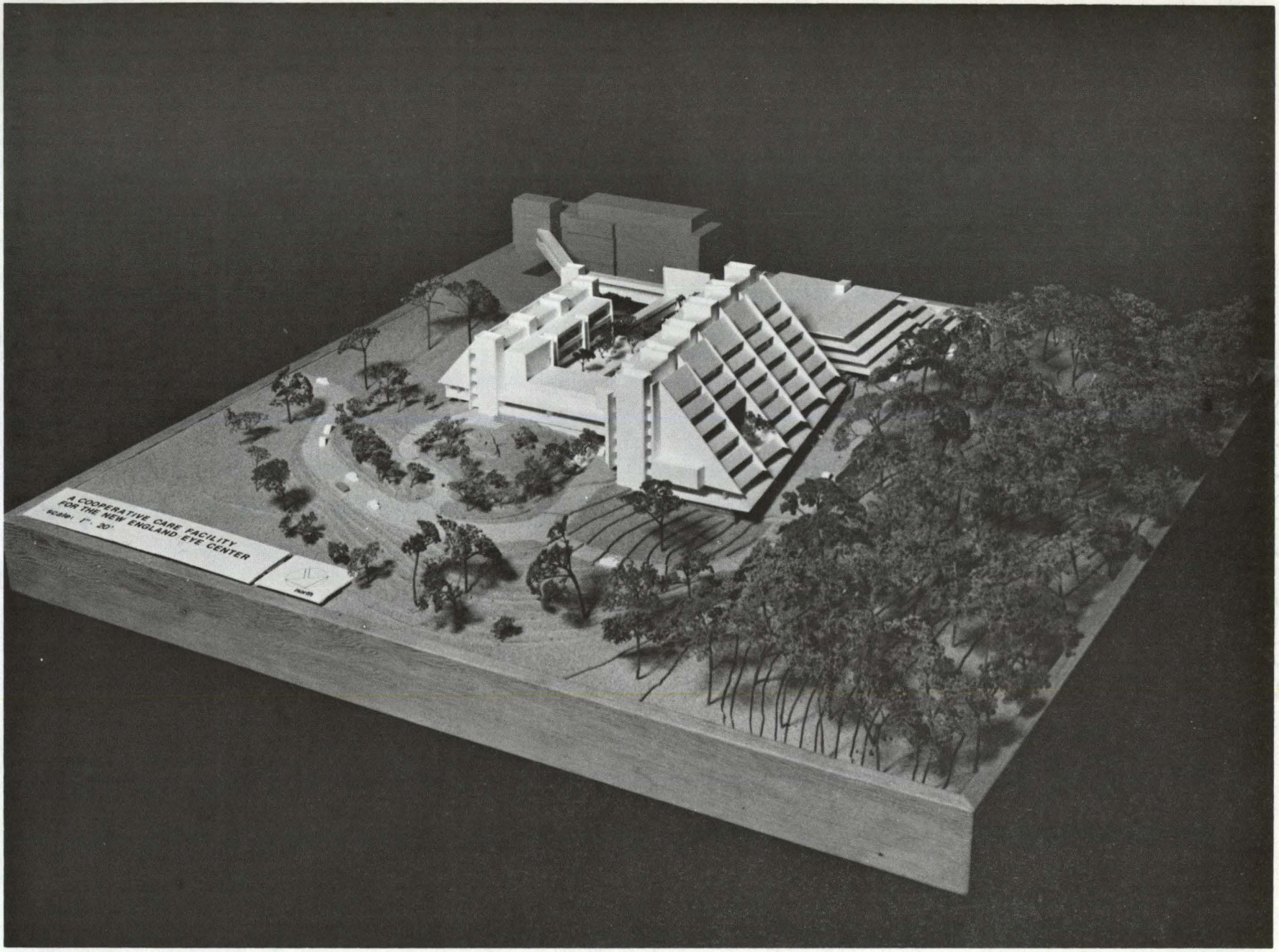
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scale: 1" = 20'
north

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[2]Eli Ginzberg, Man and Medicine, as quoted in Norman Cousins, Anatamy of an Illness as Perceived by the Patient, p. 22.

[3]Dewayne Oberlander, "A Cooperative Care Center at Pennsylbania Hospital" (unpublished preliminary program description, feasibility study and development program, Ewing Cole Cherry Parsky, Architects, Philadelphia, Pa. 1982) p.5.

[4]John L. Ryan, The Ryan Advisory (Gaithersburg, Md.: The Ryan Advisors, Inc., 10001 Stedwick Rd., 1983) p.1.

[5]Donald E. Johnson, "Co-op Units Offer Personal Care by Reducing Costs 40%" Modern Healthcare (July, 1982), p. 99.

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